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AUTHOR Dombrower, Jule; And Others
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ABSTRACT

The first volume of a program to increase the academic growth of preschool and primary grade children through the utilization of brain hemisphere research, this manual outlines brain dominance theory and provides two instruments for assessing students' preferred style of learning. Material is provided in eight sections. Section 1 introduces the teacher to right and left brain research and teaching strategies. Section 2 contains guidelines for administering and evaluating the two tests of brain hemisphere ability. The importance of individualizing learning activities based on test findings is addressed in section 3. An overview of lesson plans and specific teaching strategies are provided in sections 4 and 5. Section 6 outlines the application of this program at one preschool. The bulk of the manual (section 7) contains the materials for the tests of left hemisphere and right hemisphere ability. The test of left hemisphere ability contains 25 items which the student listens to and tries to repeat accurately. Included in the right hemisphere test are 19 items which require the student to identify objects by naming partially completed pictures. A final section consists of a set of activities designed to improve and integrate right and left brain processes. A bibliography is included. (LP)

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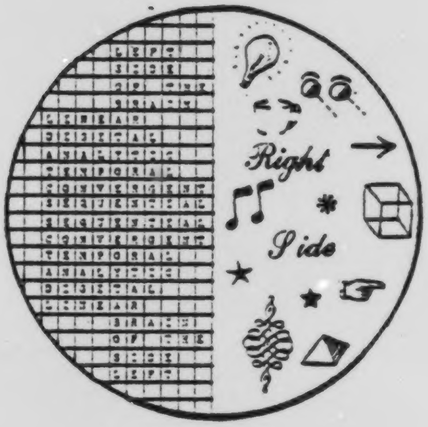
Teaching Both Sides of the Brain



Book I

Manual

Brain Hemisphere Activities

SP 015 240

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Administrator: Jane Favero

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June 30, 1982

TEACHING BOTH SIDES OF THE BRAIN

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INTRODUCTION

Purpose

The purpose of this program is to increase academic growth of preschool and primary school age children in both regular and special education classes. This is done by assessing students' preferred style of learning and then prescribing activities which stimulate brain hemisphere integration.

Brain hemisphere integration is the optimal use of the abilities of the two hemispheres either singly or in concert. The goal of this program is to develop students' capacities for brain hemisphere integration which will in turn increase their ability to master academic skills.

The program is based on current theory and research in the neurosciences stimulated by the Nobel Prize winning work of Roger Sperry who demonstrated that the left and right hemispheres of the brain process information in two very different ways and that normal processing and learning require the two hemispheres to function in a highly integrated manner.

It has been determined that the left hemisphere processes information sequentially and is, therefore, superior in verbal and analytic tasks; the right hemisphere processes information in wholes, and is, therefore, superior in visual and spatial information and that the integration of the two brain hemisphere processes is necessary for higher level thinking and problem solving capability. In fact, most mental abilities related to academic skills normally involve a high degree of brain hemisphere integration.

The program does not over-emphasize or concentrate on art and music, although it incorporates art and music into the curriculum.

The program does not replace or exclude the more traditional verbal, analytic styles of teaching.

The program does incorporate strategies which "beam" to both right and left hemispheres. For example, students are guided toward developing visual images (right brain) as they read (left brain) to improve reading comprehension. They are provided with concrete objects to observe and manipulate as concepts are discussed. The program encourages the use of both hemispheres either singly or in concert (whichever is most effective) when solving problems.

Overview

Preparation

Those involved in implementation of the program, i.e., teachers, aides, parent volunteers, support staff, must first become familiar with the theoretical concepts and strategies basic to the program. It is important to have a clear understanding of the model of brain hemisphere specialization and how it relates to a student's preferred style of learning. All necessary background in theory is included in this manual. In some cases formal training (inservice for professional staff and aides; parent meetings for parent volunteers) is helpful in preparing to implement the program.

Materials

Project materials include a manual, two assessment instruments, and four sets of lesson plans and materials. Following are descriptions of these materials:

> The Project Manual includes relevant background information about brain hemisphere theory and research, a guide to assessment procedures, a guide to the use of lessons and materials, and a section on general project strategies.
>
> The Test of Left Hemisphere Ability is a 25-item test in which the student listens to a statement and then tries to repeat it accurately.
>
> The Test of Right Hemisphere Ability is a 19-item test which requires the student to identify by naming partially completed pictures (test of gestalt or visual closure).
>
> Norms for the two tests have been established so that raw scores can be converted to age equivalents. Results of these two tests are used to assess students' preferred styles of learning.
>
> The set of Brain Hemisphere Activities consists of a section of lessons designed to improve right brain hemisphere processes, a section of lessons designed to improve left brain hemisphere processes, and a section of lessons designed to facilitate brain hemisphere integration.
>
> The set of Reading Lessons consists of a variety of lessons which are specially designed to improve basic reading skills by using right brain hemisphere processes, left brain hemisphere processes, and a process of brain hemisphere integration.
>
> The set of Math Lessons consists of a variety of lessons which are specially designed to improve basic math skills by using right brain hemisphere processes, left brain hemisphere processes, and a process of brain hemisphere integration.
>
> The set of Social Studies/Science Lessons consists of a variety of lessons which are specially designed to reinforce knowledge related to social studies and science through the use of right brain hemisphere processes, left brain hemisphere processes, and a process of brain hemisphere integration.

Assessment

Project developed tests designed to measure brain hemisphere ability are administered, learning style preference is assessed, and students can then be grouped accordingly.

Instruction

Lessons and materials designed not only to require use of pathways to left and right brain hemispheres but also to develop brain hemisphere integration are assigned during 30-45 minute sessions three times per week. These materials, as well as techniques and strategies described in the manual, can also be incorporated, whenever appropriate, into the ongoing instructional program.

THEORETICAL BACKGROUND

It has long been established that the left side of the brain controls the functions of the right side of the body and the right side of the brain controls the functions of the left side of the body. As early as 1846, Broca determined that language impairment was associated with damage to the left side of the brain. However, now, as a result of recent work in the neurosciences, there is a new understanding of brain hemisphere specialization.

As a result of the "split brain" research started in the 1950's by Sperry and his associates, it has been determined that the two hemispheres of the brain process information differently.* The left brain hemisphere is linear, sequential, and analytic; the right hemisphere is simultaneous, wholistic, and oriented toward patterns. Therefore, the left hemisphere is best with words, details, and step-by-step development of ideas. The right hemisphere is best with nonverbal information, spatial information, and the grasping of an entire idea.**

The following two charts provide additional examples of processes associated with the two brain hemispheres. The charts themselves also serve as examples of different processes. The first chart consists of abstract words only, and will appeal more to the left hemisphere. The second chart uses more visual imagery and is made up of examples; it will appeal more to the right hemisphere. (See figures 1 and 2.)

Figure 1

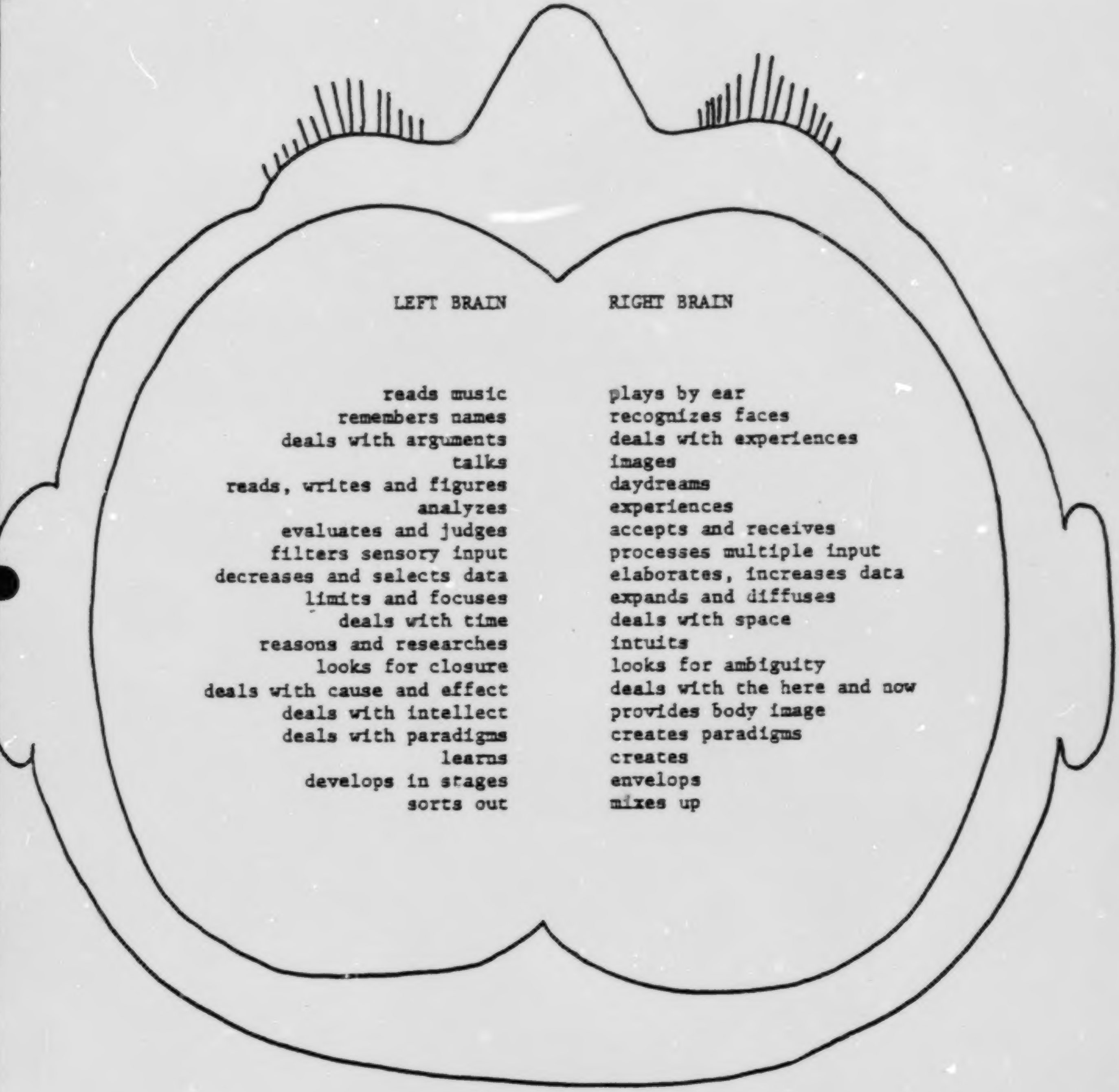
Left Hemisphere Process	Right Hemisphere Process
Sequential	Wholistic
Analytic	Synthetic
Objective	Subjective
Abstract	Concrete
Lineal	Nonlineal
Successive	Simultaneous
Discrete	Continuous
Convergent	Divergent

---

* This new model does not involve "dominance," and it has no significant relation to "handedness."

**See following: Excerpts from "Educating Both Halves of the Brain" and "Brain Functioning: An Approach to Study of Learning."

Figure 2



LEFT BRAIN	RIGHT BRAIN
reads music	plays by ear
remembers names	recognizes faces
deals with arguments	deals with experiences
talks	images
reads, writes and figures	daydreams
analyzes	experiences
evaluates and judges	accepts and receives
filters sensory input	processes multiple input
decreases and selects data	elaborates, increases data
limits and focuses	expands and diffuses
deals with time	deals with space
reasons and researches	intuits
looks for closure	looks for ambiguity
deals with cause and effect	deals with the here and now
deals with intellect	provides body image
deals with paradigms	creates paradigms
learns	creates
develops in stages	envelops
sorts out	mixes up

EDUCATING BOTH HALVES OF THE BRAIN

Excerpts from an article appearing in the October, 1976 issue of Childhood Education by David Galin, M.D., Research Neurophysiologist and Assistant Professor in Residence, Department of Psychiatry, Langley Porter Neuropsychiatric Institute, University of California, San Francisco.

Professional educators have long hoped that research on the brain would illuminate the process of education. Finally we have learned some facts about the brain that have profound implications for everyday classroom practice. It appears that our schools have been focusing most of their resources on tutoring only the left half of the brain. To develop all of the child's capabilities we must have curricula and materials for both sides of the brain, and we must cultivate the ability to use these two different minds in a complementary way.

Two Minds in One Head

The two cerebral hemispheres in humans are specialized for different functions—the left for verbal and analytic thought, the right for intuition and for understanding patterns.

Two Modes of Knowing

The left hemisphere uses an analytic, logical mode, for which words are an excellent tool, and the right uses a holistic, gestalt mode, which happens to be particularly suitable for spatial relations.

The verbal-analytic style is extremely efficient for dealing with the object world. Our modern technology, standard of living and scientific achievements depend heavily on highly developed linear, analytic methods.

The holistic mode of information processing is very good for bridging gaps; we can perceive a pattern even when some of the pieces are missing. In contrast, a logical, sequential mode cannot skip over gaps. In this imperfect world, since we are usually trying to operate with incomplete information, we very badly need to have a capacity to perceive general patterns and jump across gaps in present knowledge.

Cognitive Style: Individual and Cultural Differences

Difficulties may arise not only from a failure to develop lateral specialization but also from individual or cultural differences in preferred cognitive style. A pupil's difficulty with one part of a curriculum may arise from his reluctance to choose the cognitive mode appropriate to the work he is doing. Several investigators have found that subcultures within the United States are characterized by a predominant cognitive mode: the middle-class are likely to use the verbal-analytic mode; the urban poor are more likely to use the spatial-holistic mode (Cohen, 1969; Lesser, 1971). This dichotomy results in a cultural conflict of cognitive style and may in part explain the difficulties of urban poor children in a school system oriented toward the middle-class.

Our present understanding of the brain can contribute to developing educational research and theory and to everyday classroom practice. The purpose of these remarks is to encourage educators of all sorts — classroom teachers, administrators and researchers — to build on their experience and to consider educational problems and opportunities within the framework of what is now known about the specialization and interaction of the two halves of the brain.

Brain Functioning: An Approach to Study of Learning

Side-by-Side Models

The bilateral symmetry of the brain suggests another view of brain functioning. The hemispheric model began in 1846 with Broca's work with stroke and brain-damaged patients. Broca found that language deficits were associated with damage to the left hemisphere. Work by Sperry and his associates (Sperry, Gazzaniga, and Bogen, 1969) provided dramatic evidence that two separate thinking systems characterize cortical functioning. The hemispheres are joined by a communication network consisting largely of the corpus callosum. The corpus callosum of each of several epileptic patients was surgically cut to prevent transmission of the electrical disturbance from one side to the other. Because the hemispheres of the brain are connected to the opposite sides of the body for sensory input and motor control, information presented to the left ear, left hand, and left visual field of each eye goes to the right hemisphere and vice versa. For the split-brain patients, the information sent to one hemisphere could not travel across the corpus callosum to inform the other side of the brain. One side of the brain and its half of the body did not know what the other half was doing.

Ingenious experiments were used by the brain investigators to examine the special abilities of the two hemispheres. For example, in one such experiment, split-brain patients were given objects to feel separately with either the right or left hand. A subject's own hands and the objects to be felt were shielded from the subject's sight. When the left hand (right hemisphere) was presented a cutout numeral to feel, the person could indicate the value of the numeral with fingers, but only with the left hand. When asked to name the object or show the value with the right hand (left hemisphere), the person could only guess. Even though the right hemisphere could not verbally describe a cup presented to the left hand, it could find the cup again. The right hemisphere was mute but not ignorant, as had sometimes been thought.

In another study, Levy, Travarthen, and Sperry (1972) had split-brain subjects memorize the pictures and names of eight people. The subjects then were asked to identify pictures which were actually combined halves (chimera) of two of the faces already associated with names. The subjects watched a dot in the center of a screen. Then a chimera picture was flashed for a tenth of a second—too short a time for the eyes to scan across the picture. Thus, each brain hemisphere saw only half of the picture. When asked to identify the person's face by pointing, the subjects found the face which had occupied the left visual space (right hemisphere). However, when the subjects were asked to name the face they had seen, they named the person seen in the right visual field—information that had been received by the left hemisphere. Results from dozens of studies (Wittrock 1978b) revealed a pattern of strengths demonstrated by the two halves of the brain. These studies found that in a majority of people the left hemisphere tends to operate as an analytic specialist and a detailed and sequential builder of ideas; it is best able to store or retrieve information in a part-by-part coded form such as words. The right hemisphere in most people tends to work as a specialist in understanding an entire idea and filling in the necessary missing gaps; it is prone to store or retrieve information in a spatial manner such as pictures or images.

The importance of split-brain discoveries might have been limited if work had not also been continued with people having an intact corpus callosum. To assess hemispheric processing in normal adults and children, experiments were devised in which individuals were asked to respond to stimuli presented simultaneously to the two hemispheres via contralateral connections from the right and left hand, right and left ear, or right and left visual half-field. Assumptions underlying this research technique imply that simultaneous presentation to the two brain hemispheres will cause competition between them and that the hemisphere which has a thinking style best suited to the task will perform better. For a comprehensive review of this data, see Wittrock (1978b), Chall and Mirsky (1978), Harnad (1977), and Kraft (in press). The following examples are illustrative of a large research literature.

Kimura (1961) employed a dichotic listening technique in which competing signals were directed simultaneously to each ear. When numbers were used as stimuli, the left hemisphere/right ear was more accurate. However, when environmental sounds were used, the right hemisphere/left ear was more accurate (Knox and Kimura 1970). These findings point to the verbal speciality of the left hemisphere while suggesting that auditory input of less verbally coded information is handled best by the right hemisphere. Witelson (1977) used the sense of touch in dichaptic tests. When right-handed children reached into a curtained box and explored irregular shapes with fingers of each hand, the left hand was more accurate at identifying shapes. Thus, the spatial strength of the right hemisphere was demonstrated in normal people. The experiments show a tendency for each hemisphere to be better at certain tasks presented in certain ways consistent with the split-brain findings. The electroencephalogram (EEG), another research technique, records and analyzes brain waves while individuals perform tasks. EEG studies show that while a subject is doing a verbal task such as writing a letter or taking notes, alpha waves (which indicate brain idling) are more prevalent in the right hemisphere and beta waves (which indicate higher level cognitive processing) are more prevalent in the left hemisphere. During a spatial task, such as constructing a block design, the pattern of brain waves is reversed (Galin and Ornstein 1975).

All these studies could be and sometimes have been misinterpreted to mean language is a completely left-brain activity or art is an entirely right-brain one. This incorrect interpretation misses the main point of hemispheric brain functioning and learning: Hemispheric brain functioning emphasises differences in processing. The two hemispheres extract different aspects of meaning from the same experience. In appreciating a painting, both overall color and contour and specific features are assessed. Music has a recognizable melody even when details such as key and tempo are changed. Mathematics uses specific symbols and linear operations to express largely spatial relationships.

The two hemispheres generate unitary inner experiences by providing two points of view on external experiences. The corpus callosum and other connections allow interhemispheric communication for comparing and evaluating the knowledge of each side. People have the capacity to engage both the analytic and emotional, verbal and visuo-spatial, and sequential and simultaneous modes. However, the mode actually used depends on many variables. Personal preference or intention, salient features of experience, instructions, habitual reliance on one type—all may determine which processing style takes the lead. One side may dominate the reception and the response without the check and balance of complementary processing. Integrated experience for meaningful learning is one clear educational implication of the hemispheric model.

The side-by-side model provides a foundation for a new appreciation and assessment of individual differences. Differences may arise from (1) predominant processing styles of individuals and their ability to adapt processing appropriately, (2) experiences that enhance or inhibit integration of processing, or (3) dynamic interaction of processing styles and experience.

Martin Languis, Tobie Sanders and Steven Tipps, Brain and Learning: Directions in Early Childhood Education, (Washington D.C.: National Association for Education of Young Children, 1980, pp. 10-13.

ASSESSMENT

Assessment of student's preferred style of learning begins with the administration of the two project developed tests designed to measure left and right brain hemisphere abilities. Complete copies of the tests are included at the end of the manual. Description of each test (including information on norms, reliability, and validity) and information about test interpretation follow.

Test of Left Hemisphere Ability

This is a 25-item test in which the student listens to a statement and then tries to repeat it accurately. The statements used are composed of abstract words that are not generally associated with any visual imagery, i.e., "How could that have been known?" In addition, the statements are read without inflection.

Rationale

It has been well established that the left side of the brain is the side involved in speech and verbal expression. The following excerpt from an article of Stephen D. Krashen (1975) provides substantial evidence supporting the relationship between left hemisphere function and speech and verbal expression.

"...It is known that the left side of the brain is somehow involved in the language function, since

1. loss of speech caused by brain damage occurs far more frequently from left-sided lesions than from right-sided lesions (Russel and Espir, 1961)

2. when the left hemisphere is temporarily anesthetized, loss of speech results, but when the right hemisphere is anesthetized, this generally does not occur (Wada and Rasmussen, 1960)

3. when competing, simultaneous verbal material is presented to the two ears, a reliable right-ear advantage in response accuracy and reaction time is found, presumably a result of better right-ear connections to the left hemisphere (Kimura, 1961, 1967; Springer, 1971)

4. when verbal material (or material easily coded into language) is presented to right- and left-visual fields, most subjects show a right-visual field superiority in response accuracy or reaction time, presumably due to better right-field connections to the left hemisphere (McKeever and Huling, 1970, 1971; Umilta, Rizzolata, Marzi, Zamboni, Franzini, Camarda, and Berlucchi, 1974)

5. during verbal tasks, whether performed overtly or covertly, increased alpha wave suppression and a greater evoked response is found over the left hemisphere (Wood, Goo, and Day, 1971; Morgan, McDonald, and MacDonald, 1971; Robbins and McAdam, 1974)...

The finding that dichotically presented melodies (Kimura, 1964), sonar signals (Chaney & Webster, 1966), and environmental sounds (Curry, 1967) were better perceived by the left ear in normal right-handed subjects dismissed any hypothesis that the left hemisphere was specialized merely for some level of audition or general attention...

Blumstein and Cooper (1974) found a left-ear advantage in normal right-handed subjects for the identification of intonation contours (corresponding to the intonation used for declarative, imperative conditional, and interrogative sentences in English), even when such contours were superimposed on linguistic material (a series of short nonsense syllables). This contrasts vividly with Van Lancker and Fromkin's results with linguistic tone, but, as Blumstein and Cooper point out, is consistent with observations that left-hemisphere damage does not seem to affect recognition of intonation: Aphasics can distinguish commands, questions, and declarative sentences. Blumstein and Cooper conclude that 'the right hemisphere is directly involved in the processing of intonation contours...'"

Administration and Scoring

Instructions for administering and scoring are contained on the first page of the test.

Norms

Norms for the Left Hemisphere Test have been established, and raw scores can be converted to age equivalent scores (see norm table on first page of test at end of section). The test was normed on a sample of 190 students from predominantly white, middle-class communities. The students ranged in age from four to eleven years. About 25 students at each age level were sampled.

Reliability

Reliability estimates for the Left Hemisphere Test varied across seven age levels from .68 to .80 the median values being .76.

Validity

Relative to CTBS-Reading pretest and posttest criteria measure, the Left Hemisphere Test yielded validity coefficients of .48 ($p<.01$) and .55 ($p<.01$). Relative to the CTBS-Math pretest and posttest criteria measure, the Left Hemisphere Test yielded validity coefficients of .33 ($p<.01$) and .34 ($p<.01$). Some evidence for the discriminant validity (an aspect of construct validity) of the Left Hemisphere Test (when correlated with the Test of Right Hemisphere Ability) was a correlation coefficient of .13. The corresponding partial correlation for which grade level was held constant was .05.

Test of Right Hemisphere Ability

This is a 19-item test in which the student identifies, by naming, partially completed pictures (test of visual gestalt or visual closure).

Rationale

The project developed test designed to measure right hemisphere ability is similar in structure and format to the Street Gestalt Completion Test (It was necessary to design a new test that utilized pictures which would be familiar to young elementary school age children and not associated with a particular historical era, i.e., old fashioned stove, soldier, and clothing. A test of visual closure like the Street is one of the best measures available for assessing right hemisphere ability. According to TenHouten (1973), it is apparent that verbal and logical-analytic skills are of little help for this test. He cites additional support for the right hemisphere function involved in the visual gestalt or visual closure test.

DeRenzi and Spinnler (1966) found that right hemisphere damage impairs performance more than does damage to the left hemisphere. For split-brain patients, it is known that test performance impairs abilities of the right hemisphere more than those of the left (Sperry, Gazzaniga, and Bogen, 1969). On this basis, it can be predicted that commissurotomy patients would do poorly on the Street Test, a result obtained by Bogen *et. al.* (1972:54-55).

Administration and Scoring

Instruction for administering and scoring are contained on the first page of the test.

Norms

Norms for the Right Hemisphere Test have been established, and raw scores can be converted to age equivalent scores (see norm table on first page of test at end of section). The test was normed on a sample of 190 students from predominantly white, middle-class communities. The students ranged in age from four to eleven years. About 25 students at each age level were sampled.

Reliability

Reliability estimates for the Right Hemisphere Test varied across seven age levels from .37 to .77, the median value being .66. A test-retest reliability estimates for a sample of 30 students was .55 (10 week interval).

Validity

Relative to CTBS-Reading pretest and posttest criteria measure, the Right Hemisphere Test yielded validity coefficients of .21 ($p>.05$) and .23 ($p<.05$). Relative to the CTBS-Math pretest and posttest criteria measures, the Right Hemisphere Test yielded validity coefficients of .26 ($p<.05$) and .26 ($p<.05$). Some evidence for the discriminant validity (an aspect of construct validity) of the Right Hemisphere Test (when correlated with the Test of Left Hemisphere Ability) was a correlation coefficient of .13. The corresponding partial correlation for which grade level was held constant was .05.

Interpretation of Tests*

After the tests are scored, the raw scores can be converted to age level equivalents.

The age level equivalents for the two tests are compared and both scores are compared to the student's chronological age (C.A.). If an age equivalent score is equal to or higher than the student's C.A., it is designated "average or better" and reflects a strength. If an age equivalent score is lower than the student's C.A., it is designated "below average" and reflects a weakness. When the age equivalent score for both tests are compared, the higher score reflects a preferred style of learning. On the basis of these comparisons, students are identified as belonging to one of six possible groups:

1. Average or better on both tests—higher on the left test
2. Average or better on both tests—higher on the right test
3. Average or better on the left test—below average on the right test
4. Average or better on the right test—below average on the left test
5. Below average on both tests—higher on the left test
6. Below average on both tests—higher on the right test

These six categories can be easily divided into two major groups—three are "Higher Left" and three are "Higher Right" (note underlined words above). Following is an example of a way to chart a group of students and determine grouping.

Immediately below is a chart of scores for students A-F. The chart includes each student's C.A., Raw Scores, and Age Equivalents. The second chart provides a way to group students.

		Left Hemisphere		Right Hemisphere	
Student	C.A.	Raw Score	Age Equivalent	Age Equivalent	Raw Score
A	7.6	27	8.7	10.6	13
B	7.3	31	Above 10.6	9.6	12
C	7.5	29	9.4	5.3	7
D	7.2	15	5.2	Above 10.6	14
E	7.9	10	Below 4.6	7.0	10
F	7.7	10	6.9	4.9	5

	Higher Left	Higher Right	
Average or above on Both Tests	B Above 10.60/9.6	A 8.7/10.6	Average or Above on Both Tests
Average or Above on Left Test	C 9.4/5.3	D Above 5.2/10.60	Average or Above on Right Test
Below Average on Both Tests	F 6.9/4.9	E 4.6/7.0	Below Average on Both Tests

---

*It is always important to consider these test results in conjunction with observed student behavior and performance. Familiarity with the theoretical background of this program is a critical part of assessing any student's learning style preference.
Whether a student is considered higher left or higher right can be partly based on behavioral indications, i.e., chronic daydreaming, exceptional artistic ability, and difficulty with verbal expression suggest right hemispheric style; concern with time, concern with rules and order, structured verbal ability, suggest left hemisphere style.
This is particularly important in the case of both tests resulting in equal age equivalent scores.

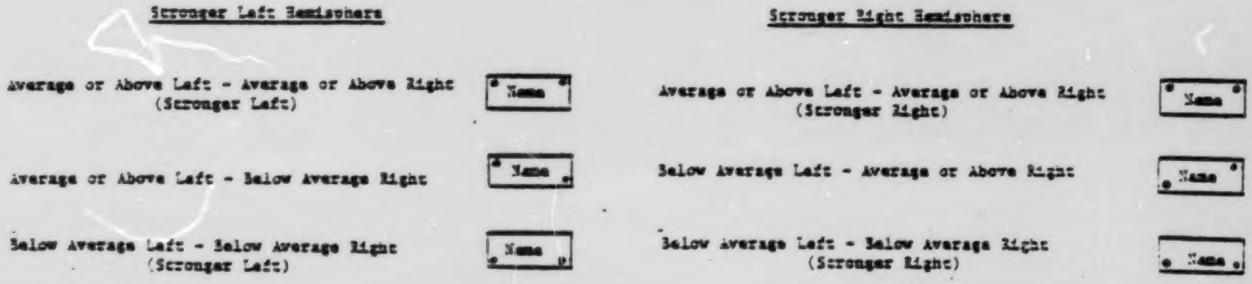
INDIVIDUALIZATION

An integral part of the program is individualization based on the assessment of each student's relative hemispheric abilities and preferred style of learning. On the basis of project developed assessment techniques, students are identified and grouped in the following way:

> All students are given the project developed tests of left hemisphere ability and the project developed test of right hemisphere ability. Students that perform better on the "left hemisphere" test are placed in the "stronger left" group. Students that perform better on the "right hemisphere" test are placed in the "stronger right" group (see Assessment-Interpretation).
>
> In addition to being grouped on the basis of brain hemisphere ability, students are also identified in terms of their levels of ability. Each student is identified by means of a simple coding system in which dots are placed by each student's name. With younger students (preschool - 2nd grade), large name cards are placed in front of each student. Each card is coded with two dots:
>
> > The dot on the left side represents "left hemisphere" ability. If it is at the top, this indicates average or stronger ability; if it is at the bottom it indicates less than average ability. Likewise, the dot on the right represents "right hemisphere" ability and is positioned on the same basis (See Figure 1).
>
> For older students (2nd grade and higher) it is sometimes better to use the dot coding system described above on a master list. In some cases this can be a large-print list posted in plain view. In some cases it is best for the list to be on a card and seen only by the person conducting the lesson.
>
> The brain hemisphere strength designation of the group combined with the coding of a student's levels of ability, provides the teacher with a simple way of knowing which students need to be actively participating in certain lessons or portion of lessons, and which students will benefit from particular techniques or methods of expression.

Figure 1

Following is a display of the two groups to which students are assigned, the possible combinations of relative strengths and the corresponding coded name cards:


Stronger Left Hemisphere
Stronger Right Hemisphere
Average or Above Left - Average or Above Right (Stronger Left)
Name
Average or Above Left - Average or Above Right (Stronger Right)
Name
Average or Above Left - Below Average Right
Name
Below Average Left - Average or Above Right
Name
Below Average Left - Below Average Right (Stronger Left)
Name
Below Average Left - Below Average Right (Stronger Right)
Name

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LESSON PLANS

There are four sets of lesson plans. The first set contains lessons designed to develop left brain hemisphere process, right brain hemisphere process, and brain hemisphere integration; the second set contains lessons related to reading and language skills; the third set contains lessons related to math skills; and the fourth set contains lessons related to social studies and science.

All lessons are the same in format. Each lesson includes an "Objective," "Materials," "Preparation" (if necessary), and the "Activity". Sections of the lessons are coded according to the brain hemisphere process involved. The following system is used:

◐Left Brain Hemisphere Process

◑Right Brain Hemisphere Process

●Integrated Process

The reading, math, social studies/science lessons can be used as they relate to topics being covered during on-going instruction. The "Brain Hemisphere" activities can be used on an individualized basis to help students with weakness in a particular brain hemisphere process and/or integration, or to provide a successful experience for a student who has general difficulties but a particular brain hemisphere strength.

The Social Studies portion includes materials designated by season: Fall, Winter, and Springtime. Each of these includes many activities such as poems, plays, following directions, etc.

Most of the lessons in the program can be used in a preschool setting. Many of the lessons are designed specifically for preschool level students, and many of the more general lessons can be easily adapted for use with preschool level students.

STRATEGIES

General strategies have been developed to promote greater brain hemisphere integration in order to facilitate learning. The following are general strategies that can be incorporated into any lesson being presented. Many of these strategies are integral features of the project-developed lessons.

Most of the general strategy descriptions are followed by one or more pages of specific exercises. Some of these are brief and can be used in conjunction with other lessons. Some can be used independently at any time of the day.

Following are the types of strategies included:

General Lesson Format

Guided Imagining

Reading Comprehension Strategies

Math Problem Solving Strategies

Individual Chalkboards

Total Involvement

Relaxation

Nonverbal Messages - Materials

Nonverbal Messages - Activities

Focusing/Tracking

GENERAL LESSON FORMAT

The following is a special five-step general lesson format that can be used with any concept or information to taught. This format insures use of both left and right brain hemisphere processes, in addition to facilitating brain hemisphere integration. It is useful for introducing new concepts or reinforcing information that has been previously covered. The five steps are:

1. Brain Storm
2. Guided Imagining
3. Instruction
4. Total Involvement
5. Demonstrate Learning

Brain Storm: Introduce the subject to be taught with a brief and simple description, i.e., "We are going to talk about subtraction or taking away numbers." Then encourage students to brain storm about, 1) What they think they will learn; 2) What do they already know; and 3) How this relates to personal experiences.

Guided Imagining: Have students relax, close their eyes and try to imagine as you vividly describe an experience (realistic or fantasy) that is directly related to the subject to be taught, i.e., "Imagine you are in the Land of Take-Away and you have a huge, blue bag filled with oranges, and apples, and pennies, and peanuts, and marbles, and pencils, etc. As you walk down the road, a small brown monkey jumps out of a tree and holds out its hand—you pull out four peanuts from your bag, the monkey takes away two and runs away. Then you sit down on a hill covered with soft, dark, green grass. You take out five oranges and they roll away down the hill. You take out two apples—a large white horse comes by and eats one apple...etc." See the following section on Guided Imagining for additional ideas.

Instruction: This is the formal introduction of concepts and training. Student chalkboards are useful in this step. Information is presented verbally, with symbols, with pictures, and with actual objects, i.e., "four minus three equals one; 4 - 3 = 1; draw a picture of four balls and erase or mark out three balls; hold up four pencils and take three away".

Total Involvement: Follow-up "Instruction" by having students take turns, singly or in groups, getting up from their seats and becoming actively involved in the concept being taught. This could be moving quietly around the room for a designated purpose, pantomiming a concept, becoming part of a design or configuration, playing the part of a person or object, etc. (see section on Whole Body Participation in the Manual). Continuing with the "subtraction" example, students could take turns going to the front of the class and pantomiming simple "take-away" problems with their fingers while the class tries to write the problem correctly; student could act out problem by taking objects, i.e., pencils, rulers, books, from a source of materials; or students could become the objects or numbers and take themselves away. As the activity takes, place, the observing students can be writing the problems on paper or on individual chalkboards.

Demonstrate Learning: This is an opportunity to determine whether students have learned the concept or information. This is also the step at which it is effective to incorporate conventional assignments or worksheets. Students can demonstrate what they have learned by 1) Explaining the concept; 2) Drawing or non-verbally demonstrating their understanding (when possible); 3) Completing a written worksheet or quiz; and 4) Any combination of the above.

GUIDED IMAGINING

Guided Imagining: the process of orally leading students through a story-like sequence of mental images and imagined perceptions. This may include the sights, sounds, smells, tastes, or tactile sensations associated with a very realistic experience or pure fantasy.

Guided Imagining: 1) facilitates right hemisphere processes of imagining, divergent thought, non-verbal conceptualization, and creative thinking; 2) aids in relaxation; and 3) encourages and reinforces a positive use of imagination.

When we close our eyes, thoughts, images, and sensations come to us that seem to be inside our minds, It is in our "mind's eye" that we experience images, places we have been, people we know, our creations, and possibilities.

The "mind's eye" is a great place. It has no limitations. In our "mind's eye" we are free to be creative.

With our help, children can explore the world of their "mind's eye". The teacher's role is to establish an environment that will enhance imagination.

1. Provide a quiet, comfortable setting. This would include setting aside ordinary concerns students might have—unfinished work, quizzes, etc. Students may sit in a chair or sit or lie on the floor. Sometimes it helps to precede guided imagining with a short relaxation exercise. In the beginning some students may have difficulty keeping their eyes closed. Here is a series of exercises to help ease the students into guided imagining.

- Have them close their eyes fast enough so that no one in the class will see them blink.
- Have them close their eyes just long enough to see a red or black ball or dot.
- Have them close their eyes long enough to visualize the front door of their house or apartment.
- Have them close their eyes long enough to see an animal.
- Have them close their eyes long enough to see what their animal is doing.

2. Begin guided imagining by have students first fold their hands, then slowly look down at their hands, and finally slowly close their eyes.

3. Some of your students will never actually see pictures in their mind. Some will get feelings, hear voices, etc. Whatever they experience, it is important to let them know that it is alright. Whatever students experience is exactly what they're supposed to experience. No one's experience is any better than anyone else's.

4. It is not unusual to encounter distractions during guided imagining. Try to remain calm and centered, and make the distractions a part of the imagery. If a plane flies over the classroom, incorporate the sound into the journey. Or ask the students to become more involved experiencing the external sound.

5. As students become comfortable with guided imagining, they will want to share their experiences with the group. It is important to leave any interpretation of images to the students.

6. Whenever you end guided imagining, be sure to bring the students back to the starting point. Allow them to bring back whatever pleasant experiences they had. They can even go back to that pleasant mental experience or place whenever they wish. When they are ready, they may open their eyes, feeling alert, refreshed and fully centered.

7. Be creative with your guided imagining. Try to not repeat the same one too often. Allow your students to explore as many different things as possible. It is often effective to begin a lesson with guided imagining that is closely related to the subject of the lesson about to be taught. For example, imagining you are in the desert before a story about the desert; imagining you are in a bank before a lesson on money; or imagining you are a fish before a lesson on sea animals.

8. Following are some guided imagining passages prepared by a variety of writers. Use these as you like, make up your own, or have students create them either individually or as a class.

Swimming

Pretend you are wearing your swimming suit on a warm day. Notice how you feel. Imagine you are standing on the edge of a swimming pool. See who is around the pool with you. Listen to the sounds around you. Notice what the weather is like. See the shape of the pool. Notice how deep it looks. Get into the water any way you want. Feel how the water touches parts of your body. Watch yourself playing or swimming in the water for a few minutes. Notice how you and others are moving. Notice how different everything feels under water. (pause for a couple of minutes)

When you are done swimming, choose a way to get out of the pool. Feel the air as it hits your body. See yourself drying off and dressing. Slowly come back to the present.

Hot Fudge Sundae

Imagine that you are as tiny as an ant....you are standing at the base of a dish which holds a hot fudge sundae. Climb to the top of the dish, sit on the rim, then slide down the inside of the dish and land in the whipped cream. Feel how soft it is. Look at the bubbles in it. Try to make a whipped cream "snowball". Then walk on the river of chocolate sauce. Your feet stick in the sticky, gooey chocolate. Taste the chocolate. Feel the difference between the chocolate sauce and the cold ice cream. Then, grab on to the chopped nuts for hand holds, climb carefully to the top of the sundae....careful, it's very slippery. Sit on top of the maraschino cherry and look all around at the scene below you.

Tall, Tall, Tree

Imagine that you are a tall, tall tree. Your feet and toes are the roots. Stretch your toes through the cool, damp soil, and feel the moisture come up your trunk through your roots. Imagine that your body is the tree trunk. Feel the bark. Is it smooth, or rough and crinkly? Is it grey or brown? Is it large and sturdy, or is it still a slender young trunk that bends in the wind? Your arms are the branches that reach up to the sky. They are covered with leaves. Are they the new leaves of spring, or are they the red, orange, gold and brown leaves of fall? Imagine that birds flutter through your branches, and some build nests and raise families there. Imagine the way a woodpecker might feel to you if one began pecking at one of your limbs. Imagine it is cold and windy and it starts to rain... Now imagine it is nice and warm and the sun is shining on your leaves.

Christmas Gift

Imagine that you are a special Christmas present, all wrapped in pretty paper and waiting under the tree. What will you be — a bicycle, a doll, or...? What kind of paper is wrapped around you — red or gold or green, shiny or many-colored? Picture the ribbon that is holding the package together. What is it like to be waiting in the dark for the moment when you will be opened? Can you hear the sounds in the room? Maybe people are singing holiday songs. You can hear people admiring the tree and all the packages under it. Maybe you can smell the pine tree through your wrappings. You can hear the tinkling of the ornaments, and perhaps you can see the glow of the tree lights. Are you curious to be able to see everything that is happening and to know what some of the other presents are?

Roller Skate Fling

Place your hands in your lap, look at your hands and close your eyes.

Picture in your mind a pair of roller skates. You can make them any color you like. The laces can be any color or have any design you like on them.

Now put your skates on and lace them up — pretend you are gliding over a very smooth sidewalk that runs along the beach...you feel very free and light...smell the ocean air...feel the soft cool, damp air...watch the seagulls soar and drop for food...breath in the fresh cool air...feel the cool air run through your hair...take long strides...turn...glide...glide... stretch your arms forward as you glide down the sidewalk...glide...glide... stop, sit down on a bench...watch the water roll onto the sand...smell the air...slowly open your eyes...you are calm and relaxed.

Free As A Bird*

Pretend you are a bird sailing through a clear, blue sky... You catch cool breezes and glide in wide circles... Now you dive into a fluffy white cloud;...you're surrounded in soft, billowy mists... Now, sail out into the warm sunshine;...sail on the breeze...swoop down, down, down, and turn your wings slightly to make a giant loop in the sky... Do anything you want now;...be a bird;...fly free. (Allow one to two minutes more for this "free flight," because children invent all manner of maneuvers in the sky.)

Be yourself now and imagine that you are walking through a field of fragrant flowers... There is a soft breeze... Touch each flower;... smell its sweet aroma;...breathe it all in deeply... Now lie down on soft green grass;...feel the sunshine warm on your face;...rest awhile ... Now begin to choose a bouquet of your favorite flowers to take home ... Decide what you will do with them... Do that now... How do you feel?

Now I will ask you to slowly open your eyes after counting backwards from four to one. When you come to the number one, open your eyes slowly and you will feel calm and relaxed.

The Bottle**

At one time or another we have thought of putting a note in a bottle and setting it adrift. Here is an imagery experience that takes your students to the ocean...and brings them back to creative writing. Have pencils, pieces of paper, and bottles handy!

Put your hands by your sides... Close your eyes and relax... Imagine you are on a beach... The waves are gentle... The sun is warm... Listen to the waves and feel the warmth of the sun... Hear the shrill cries of the gulls overhead... Walk around a bit... What is the beach under your feet like?... Reach down and touch the beach. Get to know it better.

Go down to the water's edge and touch the salt water... Feel the cool calt spray on your face... Walk along the shore and see what has drifted in on the tide... What can you smell?... What is the weather like?... How do you feel being there?... Explore your seashore on your own for awhile, and see what else you can discover.

---

* O'Rourke, Robert. Learning, December 1976, p. 25.

**Hassard, Jack, The Whole Classroom, 1978, The Whole Classroom Publishing Group, Inc., p. 66.

Near the shore in the water a small object is bobbing up and down... As you wade toward it, you can see it is a bottle... Pick it up and look at it carefully... What is it like?... Touch it and see how it feels... Look inside... Do you see the piece of paper?... Take the paper out... What is written on the paper?

Imagine writing a note back to the person who wrote this note... What do you want to say?... Take some time to think about what you will say... Imagine putting the note in the bottle and tossing it back to sea.

Slowly come back to your existence in the room... Open your eyes... In the room is a bottle and note paper for each of you... Take some time to write the note you imagined... What will you say?

As a follow-up, place all of the note-filled bottles in the center of the room. Have students go up one at a time and choose a bootle. Give them a few minutes to read and think. Then have each person read aloud the note in the bottle he or she has chosen and express what it means — or write a reply.

Image Calisthenics

Students focus on an object in the room for at least a minute. They may either close their eyes or keep staring at it while the teacher leads them in the following guided imagining:

Rotate it - move it around
Look down on it from top
Look at it from underneath
Change its color three times
Move it away from you
Move it closer to you
Make it gigantic
Make it tiny
Totally change its shape
Make it disappear
Bring it back
Feel it
Make it rough
Make it smooth
Taste it
Make it sweet
Make it sour
Listen to it
Make it loud
Make it soft
Give it wings to fly away

After the imagining "trip", students may draw or write about one of their visualizations.

A variation is to have students imagine an object outside the classroom.

Here are some additional suggestions for guided imagining:

- hiking or backpack trip
- trip to the beach
- birthday party
- animal you would like to become
- become an atom and enter your own body
- become a piece of food being eaten by you
- exploring a cave
- exploring a haunted house
- a favorite holiday celebration
- a banana split
- visit to a zoo
- a walk through the woods
- visit to a circus
- an airplane ride
- being 100 feet tall
- being only one inch tall
- flying on a magic carpet
- everything moving in slow motion
- a sporting event
- a boat cruising on a river
- trip to a grocery store

Play music. Students visualize or draw images as they listen.

Describe or draw what is seen in the clouds.

Look at a color, paper, fabric. What does a color yellow make you think of? List these.
How does it make you feel?

Hide an object in a bag. Students feel, smell, and describe the bag's contents. Compare mental images with the real object.

READING COMPREHENSION STRATEGIES

◑Illustrate with concrete objects and manipulatives.

◑Illustrate each sentence, paragraph, or main topic using pictures or diagrams (student-made or teacher-supplied).

◑Draw an outline around each paragraph. Fill in the space before the first indented word.

◐Count the number of paragraphs and number them.

◑Read each sentence. As each word is read, a yellow line is drawn through the word.

◑Trace over end punctuation with a dark-colored crayon (., !, ?). Count the number of end punctuation marks to determine the number of sentences.

◑Draw a circle around the title.

◑Recolor the topic sentence orange.

◑Cross out unimportant words (a, an, the).

◐Underline key words.

◑Visualize sentences, paragraphs, characters, and events. Paint a picture in the "mind's eye" (visualization can be helpful in choosing key words). A marker may be provided that covers the page. It is moved down as lines are read and visualized.

◑Dramatize or pantomime the selection or parts of the selection.

◐Listen to a reading (live or recorded) of the selection before or during silent reading.

●Listen to an overview of the selection before reading independently.

●Teacher and students read the selection out loud together to increase fluency and mental imagery development.

◑Color an important word or character's name a certain color every time it appears while reading.

READING COMPREHENSION STRATEGIES (cont.)

● Color all the action words a certain color.

● Color words that rhyme the same color.

● Color various parts of the letter different colors (i.e., salutations-red, body of letter-yellow, closing-green). Draw dark outlines around each part.

● After reading a selection, students either tell, write, or draw about what came to their mind while reading. This may include thoughts not related to their reading.

◐ Sometimes the reading of a story or entire book is interrupted for a period of time. Before beginning to read again, have students visualize what the character in the book was doing the previous reading.

MATH PROBLEM SOLVING STRATEGIES

●Make problems relevant to immediate and personal experiences such as:

individual interests
class projects
school events
community events
entertainment (music, movies, games, etc.)
sports
outdoor activities
travel brochures
spending money
television programs
menus
advertising

●Students make up problems based on above themes.
●Students tell a story and make up problems based on a picture. Tell a story first.
◑Use a minimum of problems so that students have time to visualize each one.
◑Give students at least ten word problems (3-4) several times a week.
◑Encourage students to visualize and embellish the problems in their minds.
●Substitute small numbers to help students focus on what the problem is asking.
◐Have students identify unnecessary information.
●Have students estimate answers before attempting to solve the problem exactly.
●Many students have trouble with word problems because of their reading ability. The following may help:

Record the problems on tape.
Read the problem and have the student act out the problem.
Pair a good reader with a poor reader.
Read the problem slowly, emphasizing details and relationships.
Teach students specialized vocabulary used in math word problems.

◐Ask students to rewrite the problem without numbers.

●Once a problem is understood, students should be encouraged to:

make a list
make a diagram
make a table
use an equation
compute
find a pattern
work backwards
use a calculator
use manipulatives
use a deduction
act out the problem
experiment

INDIVIDUAL CHALKBOARDS

A very effective strategy is having a small chalkboard for each student in the group to use throughout the lesson.

The use of individual chalkboards motivates students and results in a high level of involvement. Each student uses a chalkboard to provide written and/or drawn responses.

The chalkboards allow students to correct responses easily, they are a means for students to respond or demonstrate understanding without having to talk; and they encourage highly integrated responses in that students can use visual tactile skills and verbal expression skills at the same time.

Chalkboards can be made in the following way:

1. Apply one coat of paint to chip board.
2. Allow 24 hours to dry.
3. Sandpaper lightly and dust off surface of chip board.
4. Apply second coat of paint and allow another 24 hours to dry.

If the use of chalkboards is not possible, the same process (except for easy erasure) can be accomplished with paper and crayons or paper and pencils.

TOTAL INVOLVEMENT

When possible it is very effective to have students participate in lessons by using their whole bodies. At the very least this means having them moving as they participate; at best it means involving their bodies as an integral part of the concept being taught. For example, an ordinary discussion of word meanings can be effectively expanded by incorporating motion. Students might be required to walk to the side of the class, face away from the class and then define a given word; students could be involved in a walking relay that requires them to go to a stack of words, select one, write (or say) the definition, and then walk back and tag their teammate; or students could be required to pantomime word definitions.

Memory of math facts, i.e., 2 + 3 = 5, 7 - 1 = 6, 2 x 4 = 8 etc. can be enhanced by having students move (hop, skip, jump, spin, etc.) as they say math facts; they can become objects to add, subtract, multiply, or divide; or they can try to actually make their bodies or parts of their bodies (hands, fingers, arms) into the shapes of the numbers and signs.

In a lesson on silkworms, students play the part of silkworms; in a lesson on the solar system, students become the planets in relation to a light; in a lesson on time, students become parts of a clock, etc.

Additional examples of "total involvement" strategies are listed below:

Searching: Students must search for hidden cards which contain words to be defined, math problems to be solved, stories to be read, directions to be carried out, etc.

Dramatizing/Role Playing: Students act out stories that have been read. Students play the parts of objects being studied, i. e., volcanoes, dinosaurs. Students act out math word problems.

Pantomime: Students attempt to explain, describe, or express ideas non-verbally.

Slow Motion: Students move very slowly while saying math facts, or while writing single word or number answers.

Model and Copy: Students copy good models of dramatized or pantomimed action, i.e., a capable student acts out or pantomimes part of a story and then a less capable student attempts to duplicate the action.

Following is a collection of exercises that can be used on a regular basis. This type of activity helps develop imagination and capacity for imagery. This type of exercise also gives students the experience of being totally involved in an activity.

Creative Movement Challengers

Challenge your students with a few of these movements:

1. "Make yourself as small as you can."
   big
   wide
   narrow
   thin
   round
   short
   tall
2. "Let yourself bounce like a rubber ball."
3. "Spin like a top."
4. "Stretch your body like a rubber band."
5. "Pretend you are the strongest person in the world. Show me how you would push two cars apart."
6. "Twist your body like a pretzel."
7. "Shake yourself like jello."
8. "Pretend you are a tree in a wind storm."
9. "Blow yourself up like a balloon and then let your air out."
10. "Pretend you are walking barefoot over sharp stones or pebbles."
11. "Tie yourself into a knot...pull yourself tighter...untie yourself."
12. "Pretend you are a rocket ship blasting off. 5 - 4 - 3 - 2 - 1 - 'Blast Off!'"
13. "Be a feather floating down to the ground."
14. "Pretend you are melting."
15. "Pretend you are frozen solid."

RELAXATION

Many times during a school day both teachers and students need time to relax. Relaxation does not have to be limited to a teacher's lounge or school playground. Poetry, soft music, slow movement, guided imagery, visualization, and focusing activities are all conducive to a more relaxed state of mind and body. In addition to the physical benefits, relaxation is helpful because it reduces tension and anxiety which so often acts as a barrier to learning. General relaxation allows students to assimilate and retain new concepts more easily; it allows for the absorption of larger amounts of information, and it facilitates creative thinking.

Following are several ways to encourage relaxation in the classroom.

Listen and Relax

Dim or turn off lights. Ask students to listen carefully and follow your directions. In a quiet voice say:

"Put your hands on your head.
Put your hands on your waist.
Put your hands on your face.
Put your hands on your elbows.
Fold your hands in your lap.
Put your feet together.
Slant your head towards your folded hands.
Close your eyes.
Take a deep breath and blow air out of your mouth.
Pretend you are blowing leaves in the air.
Take another deep breath and blow air out of your mouth."

Repeat until calmness is seen in the students.

Sand Time - Settle Down

Materials: three minute sand timers (one for every three or four students is best—one large timer can be used with a class)

Procedure: After transition times, (recess, lunch, P.E., assemblies, etc.) students sometimes need time to relax and "change gears".

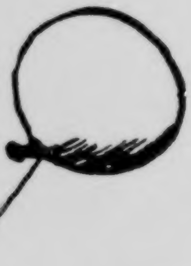
Tell students to carefully watch the sand falling through a sand timer (three to six minutes). They are not to move or talk while the sand is falling.

This may be used with the total group or a small group. With small groups, choose one member of each group to be in charge of timer. At a given signal the timer is turned over and there is no talking or movement.

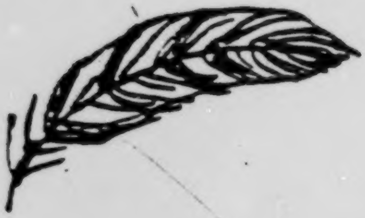
Breathing Easy

Procedure: Use some of the following exercises to help students relax by attending to their breathing:

Pretend you are blowing up balloons of various sizes and shapes.

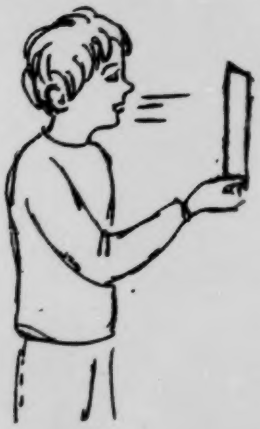


Throw an imaginary feather in the air. Pretend you are keeping it in the air by blowing on it.



Pretend to be a dolphin or a whale blowing air through your blow hole.

Cut a 1" x 4" piece of paper. Blow on it. See how far from your mouth it can be held and still bend.
Blow on it so lightly that it does not bend.



Rag Doll

Materials: rag doll

Procedure: Doll "flops" into various relaxed positions. Children imitate doll.

Compare their relaxation to the rag doll by feeling its legs and arms. Students again assume a relaxed position on the rug.

Variation: One student positions the doll, and then chooses a partner to imitate the position.

Birthday Candles

Procedure: Read the following and have students pretend to be melting candles on a cake.

> **Birthday Candles**
>
> Let us pretend we are both candles on a cake. What color shall we be? First we stand up tall and straight. We look stiff like candles. Now the sun is coming out very warm. We begin to melt. First our heads droop...then our shoulders ...then slowly...slowly....Until we are all melted into a puddle of wax on the floor. Now a cold wind comes along and it blows "wh...wh...wh...." We stand up straight and tall again.

Total Relaxation

Procedure: Have students (on the floor with legs crossed if possible) so they are comfortable.

Say: "Take a deep breath and close your eyes.
Now place both hands flat on your stomach.
Slowly breathe in and feel your stomach move.
Slowly breathe out.
Slowly breathe in....Slowly breathe out.
Now let's relax all of our muscles...start with your forehead. Do you feel any tightness...relax your forehead.
Now relax the rest of your face.

Move to your neck...very slowly move your head around...do the muscles in your neck get tight ...relax your neck.
Now feel your shoulders...relax your shoulders.
Now move down your arms through your elbows, into your hands, into your fingers...relax each part as you go.
Now back up to your chest...feel your chest as you breathe....Notice your breathing... notice your heart beat.
Now feel your stomach...notice how it moves as you breathe.
Notice your hips.
Move slowly through your legs, relax your legs as you notice your thighs...your knees ...your calves...your ankles...your feet... and finally your toes.

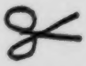
Now slowly open your eyes and sit quietly for a while."

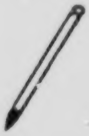
Allow students to sit quietly for a few minutes.

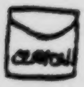
NONVERBAL MESSAGES - MATERIALS

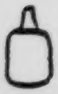
Materials: a sample of classroom materials needed for each lesson
pictures of classroom materials

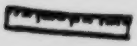
Procedure: Display pictures of classroom materials needed for each lesson pinned to bulletin board (using those included and/or pictures from old magazines).

scissors


pencil


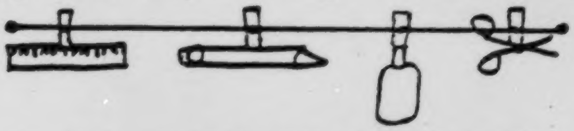
crayons


paste


ruler


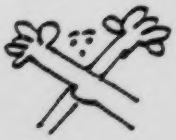
Display actual materials set on chalk tray or table.

Display actual materials hung on a "clothesline".

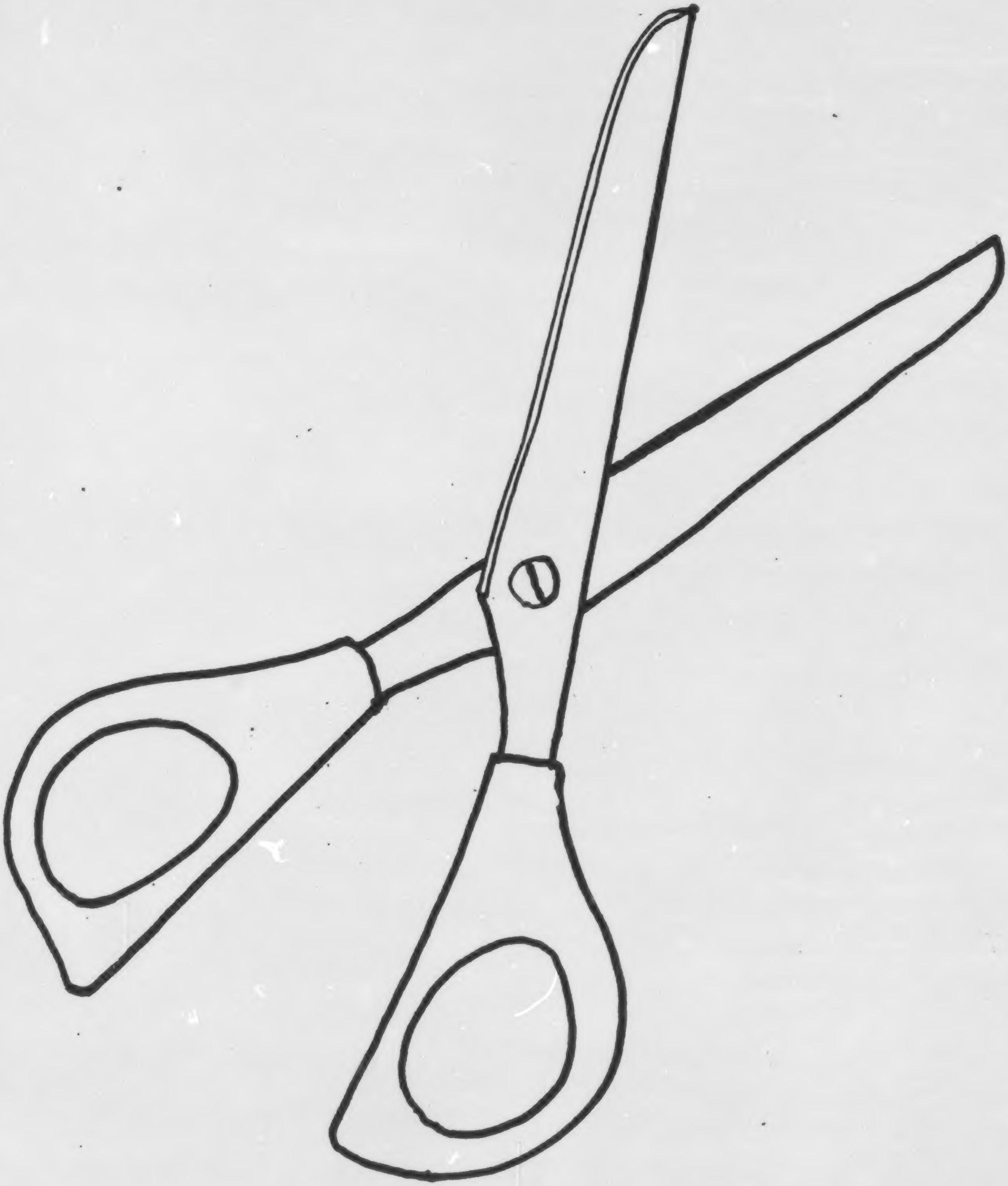


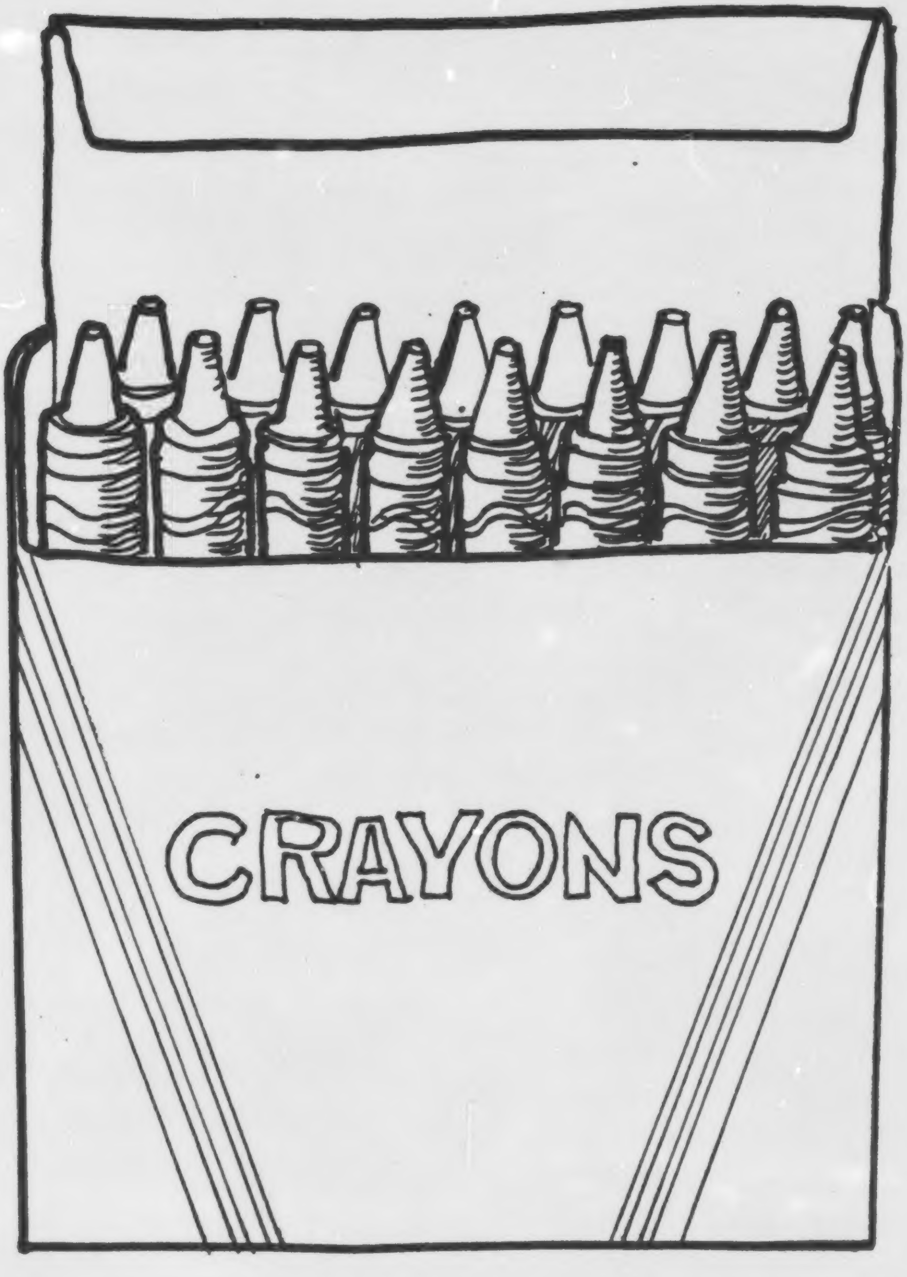
Display actual materials with magnets attached and hung on a magnet board.

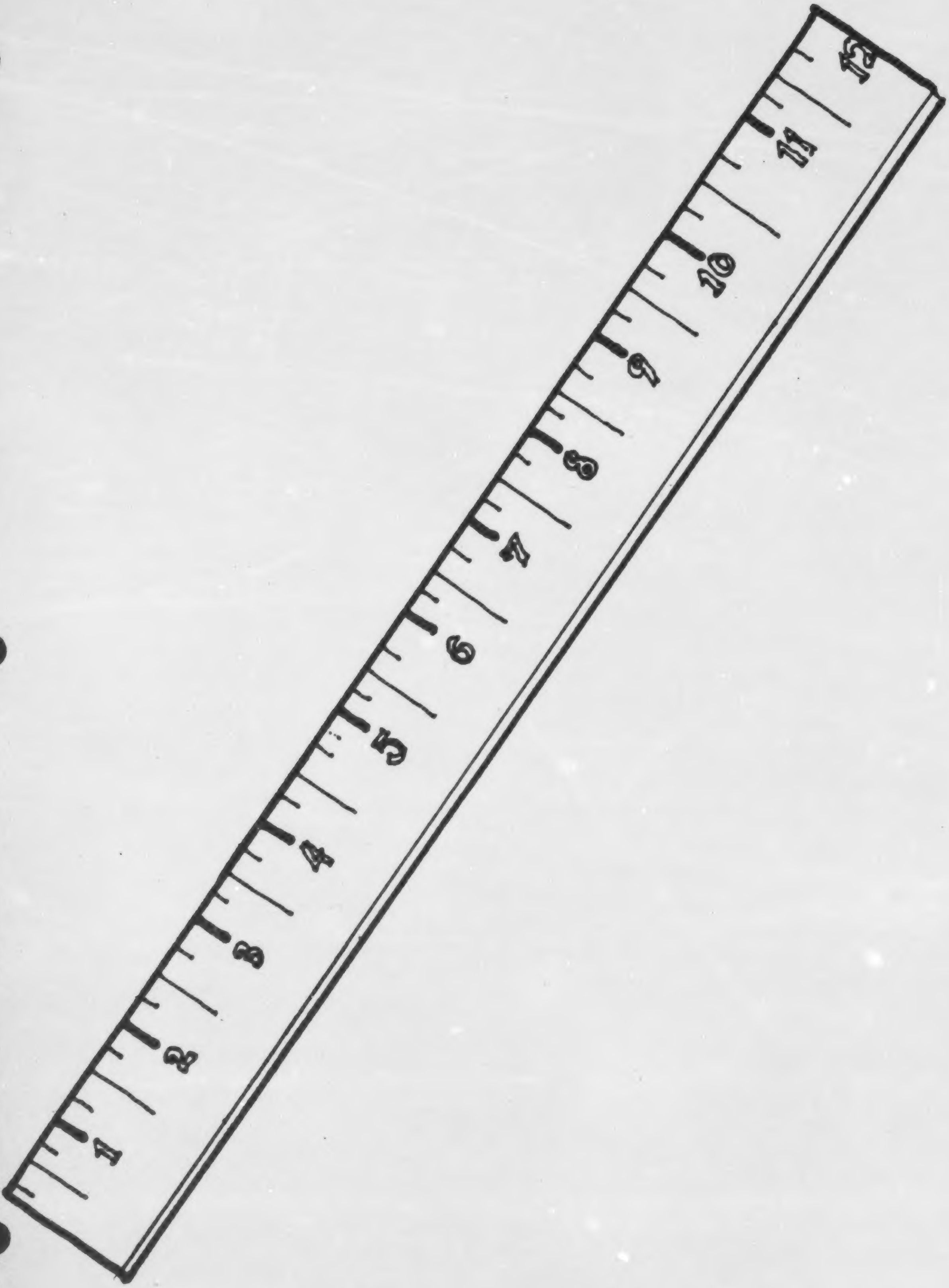
Mime the materials needed for an activity.



scissors




CRAYONS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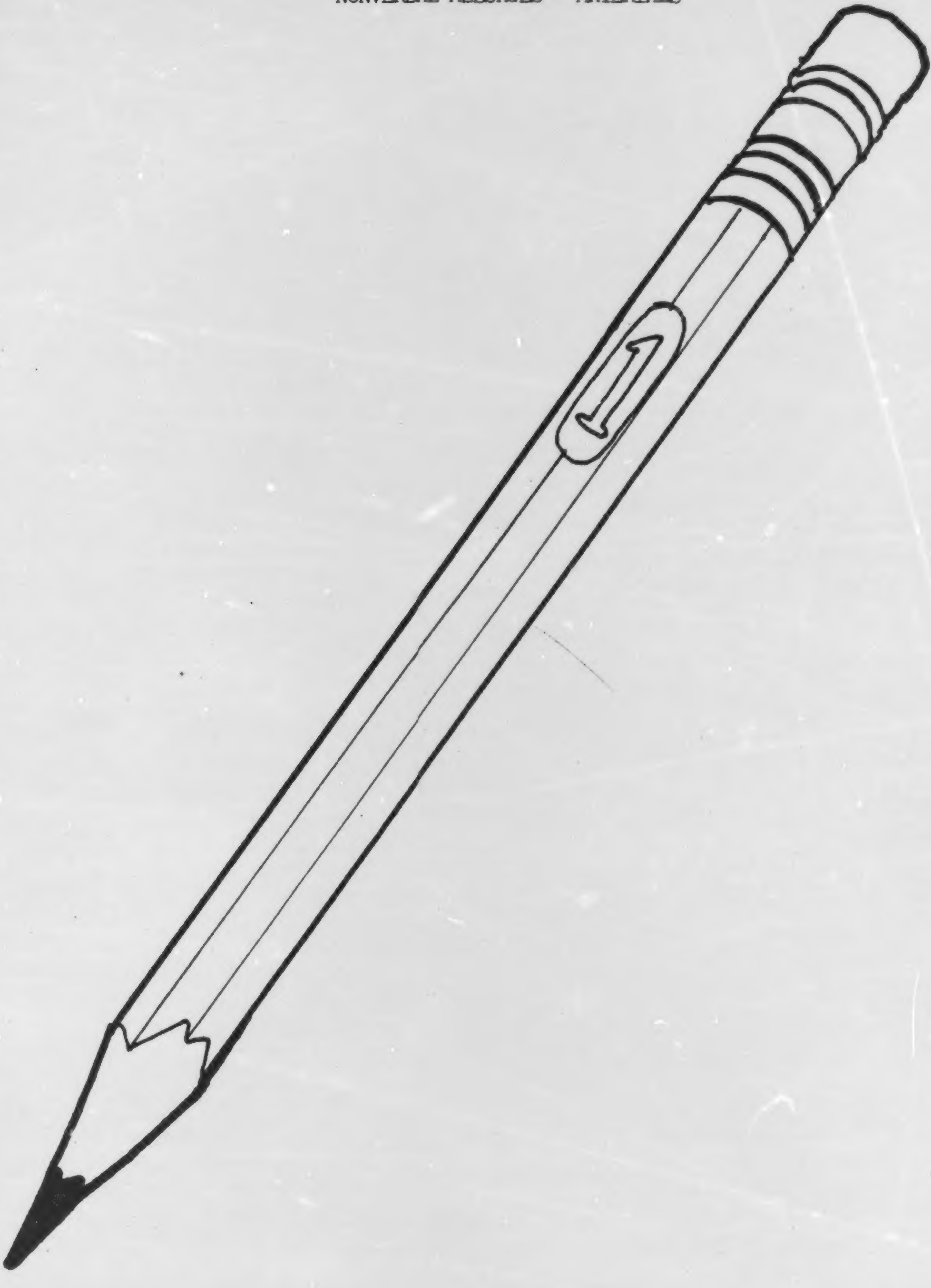
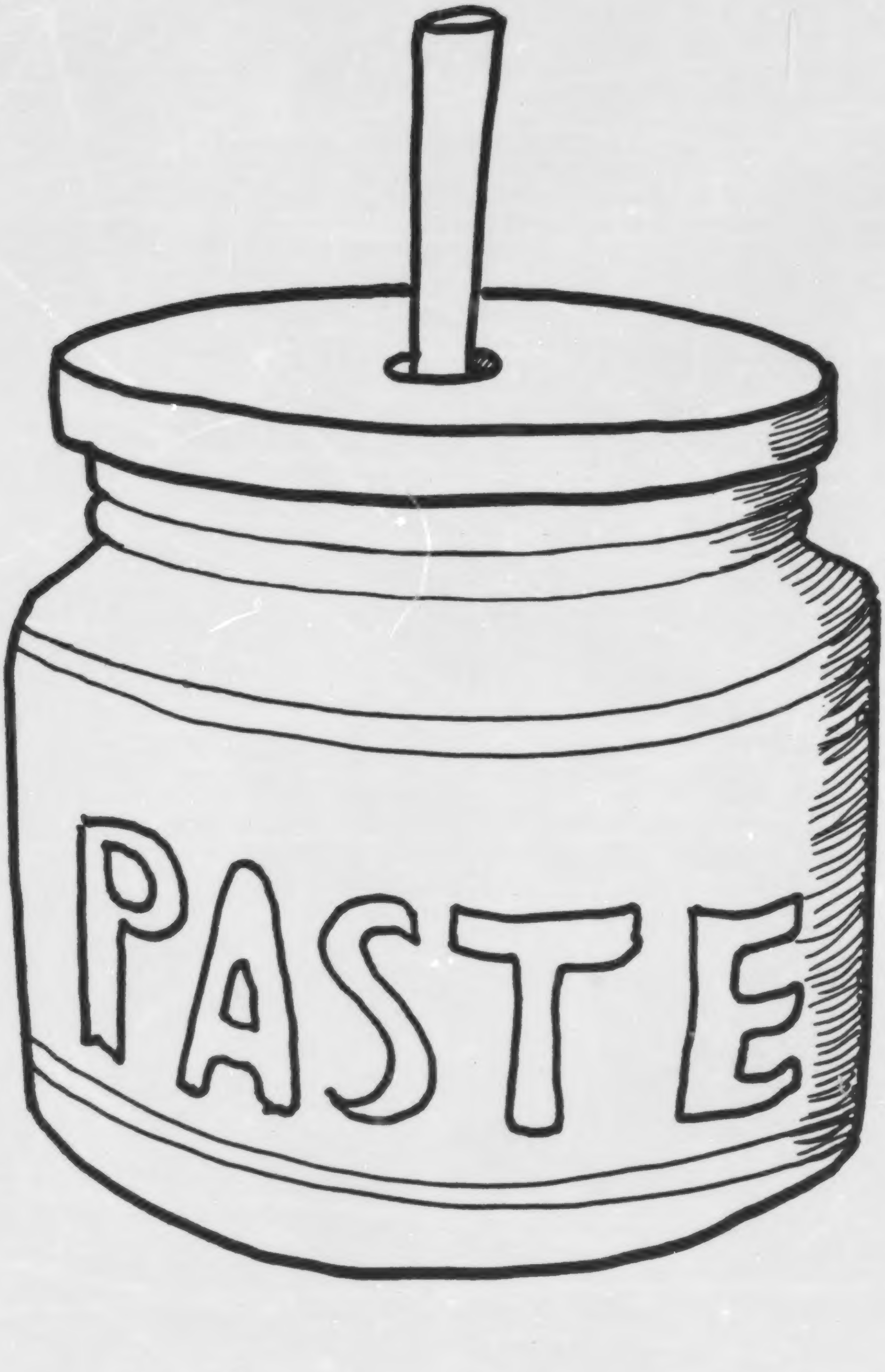
11
12


1


PASTE

NONVERBAL MESSAGES - ACTIVITIES

Materials: set of classroom activity pictures

Procedure: Display classroom activity pictures at the appropriate times:

LISTENING TIME

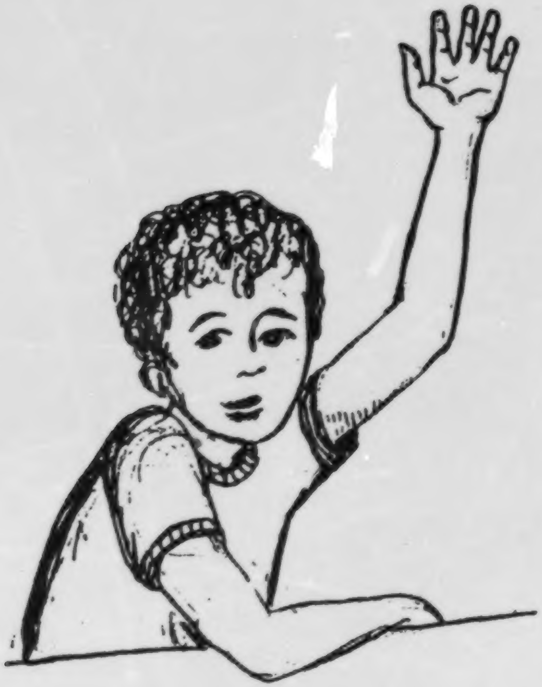
DISCUSSION TIME

WATCHING TIME

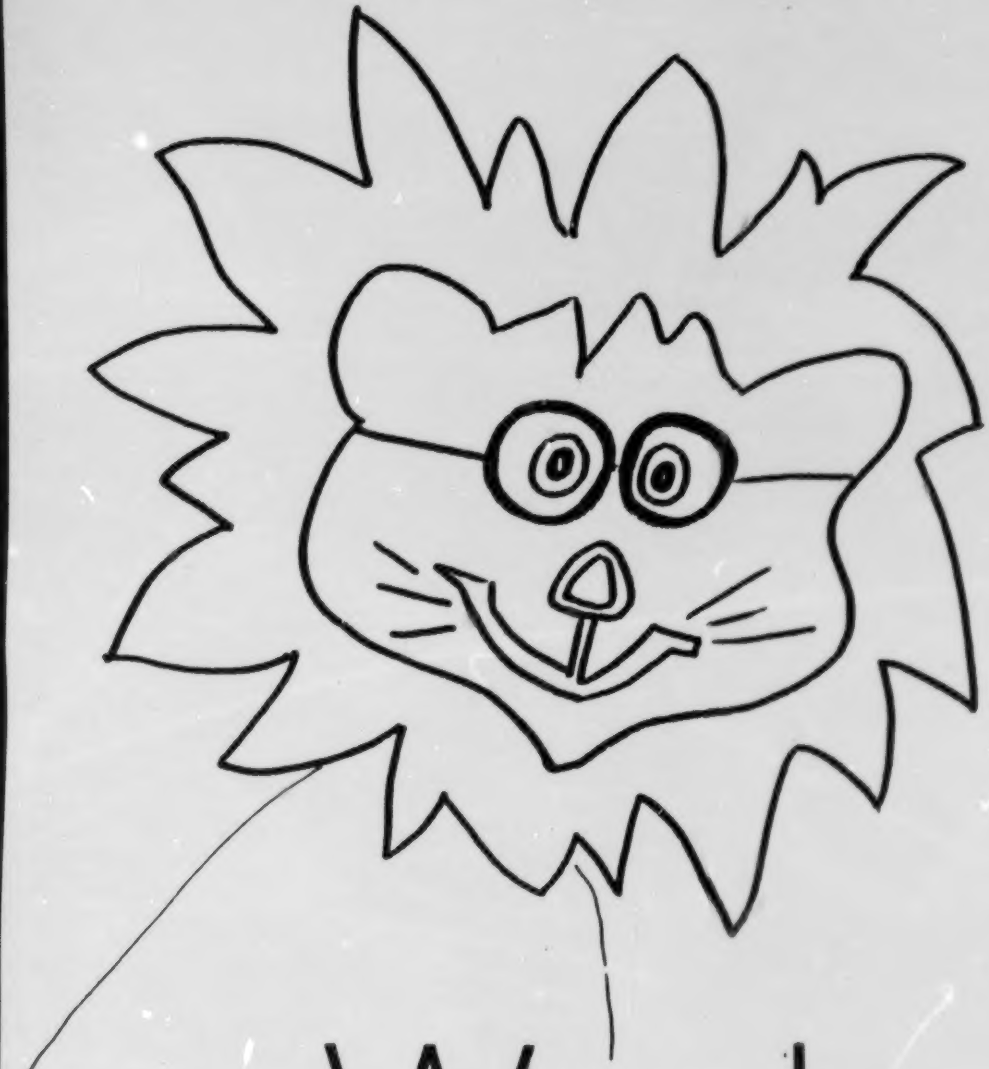
DRAWING TIME

WRITING TIME

Listening Time

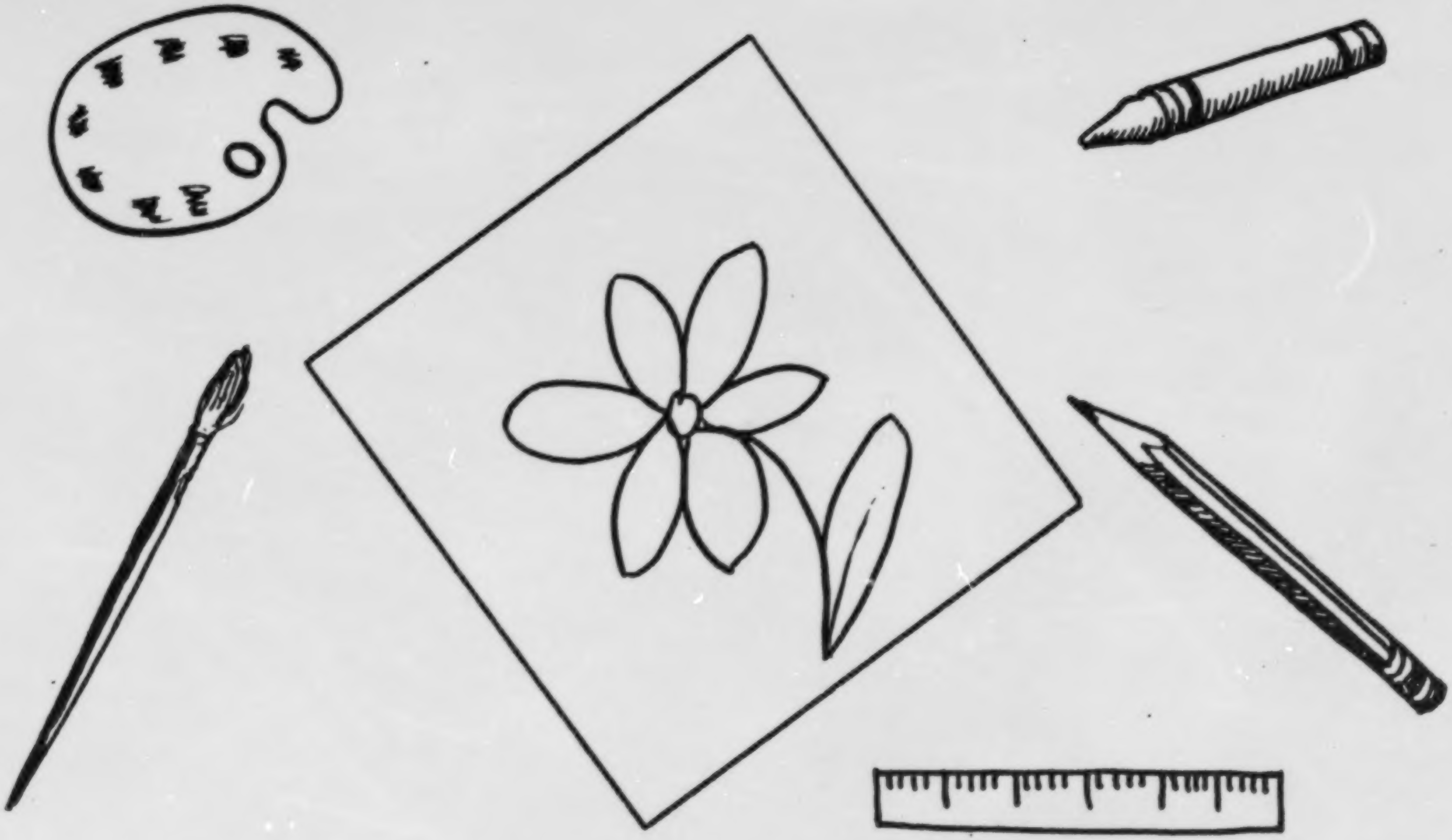


Discussion Time

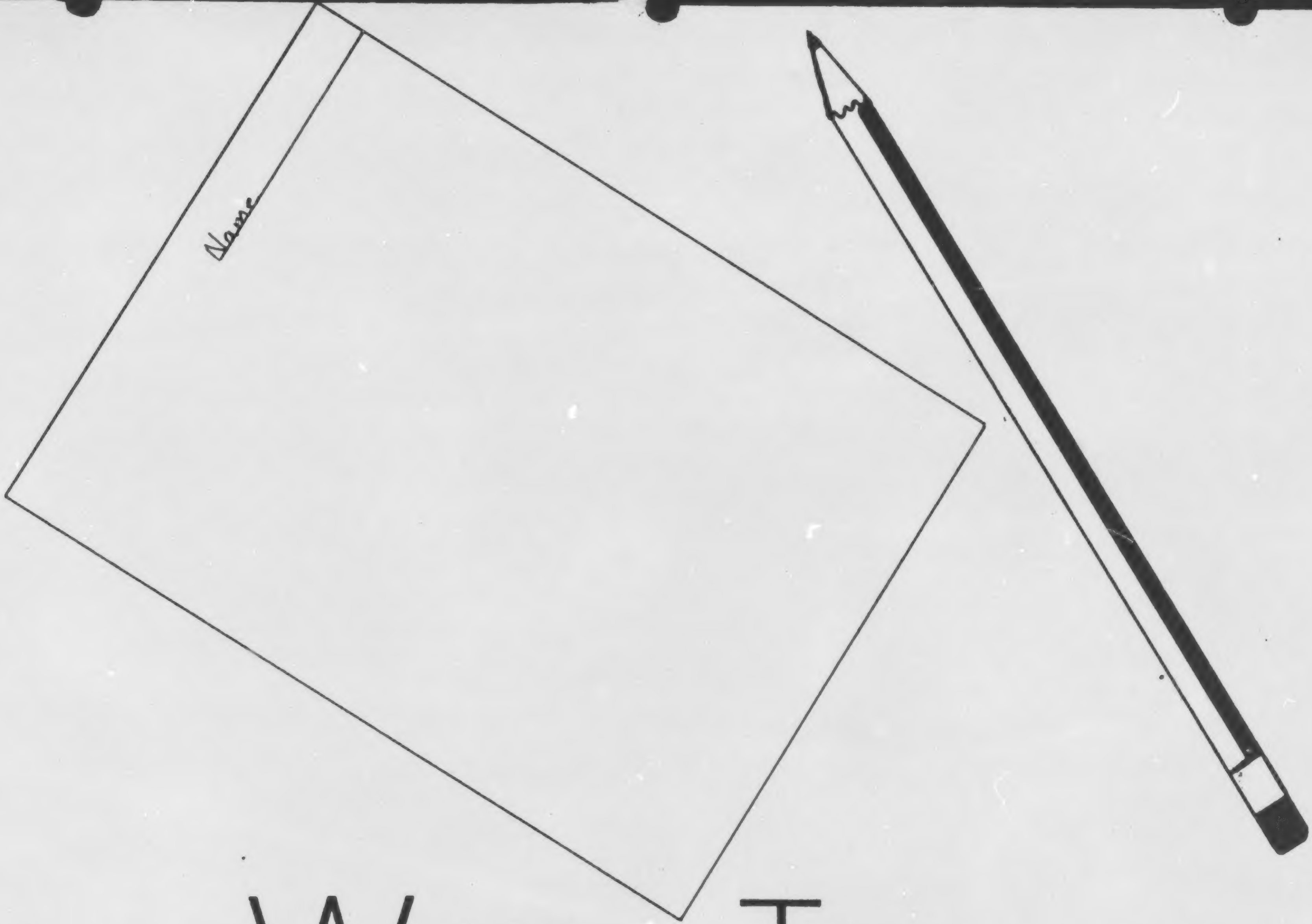


Watch

NONVERBAL MESSAGES - ACTIVITIES



Drawing Time



Writing Time

FOCUSING/TRACKING

An important strategy in the program is the use of focusing/tracking activities to help students "telescope" their vision narrowing peripheral distractions. The Tracing Tracking booklets are used at the beginning of the school day or at the start of a lesson to help students focus on a printed page and guide eye movement. The teacher may want to have students track with their fingers first before visually following the lines. This assures that eyes are tracking the lines correctly and proper focusing is taking place. If the booklets are kept in the students' desks, they can easily be used several times a day for five minute periods.

"Nose Down," "Coloring As I Read," "Telescopes Follow the Light," and "Look and See" are all 10-minute focusing activities that direct students' attention toward the written word. A concentrated reading lesson or assignment may follow.

Telescopes

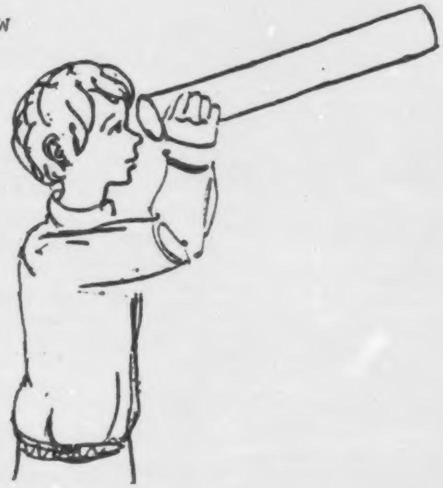
Materials: one "telescope" for each student (made from paper towel rolls or rolled paper)

Procedure: Students focus on:

blackboard
teacher
other student talking in discussion
alphabet
number line
clock

Students practice tracking the:

formation of letters and numbers
movement along a line
as they recite the alphabet
border of chalkboard
edges of door or window
edges of ceiling



Follow the Light

Materials: flashlight

Procedure: Darken the room.

Students all face the same direction. Have them rest their elbows on their desk for support and rest their chins in the palms of their hands.

Sit somewhere in the middle of the room and shine the light on the wall students are facing.

Students follow the flashlight movements with their eyes only. (No head movement.)

Move the light from left to right. Turn the light off and begin again on the left. The movements must be within the range of the students' eye movements. Keep the speed constant during each sweep. Vary the speeds of various sweeps.

Suggestions for other light movements:

- alphabet chart - students name letters
- number line - students count
- objects in the room
- words on the blackboard
- large cursive letter formations

Nose Down

Materials: pieces of paper

Procedure: Students touch their noses to their papers in the:

- center of the paper
- upper left-hand corner
- upper right-hand corner
- lower left-hand corner
- lower right-hand corner

Coloring As I Read

Materials: copy of reading material (story, poem, essay...) that may be marked
pencil

Procedure: Students are given a reading selection. They fill in a particular letter the teacher wants to stress. This may be timed.

Every g●●d b●y d●es fine.

Students read the selection.

Teacher may have students circle certain words throughout the selections.

Teacher may have students color certain letters or words (the main characters, places, action words, etc.).

Students draw a yellow line through each word as it is read.

Look and See

Materials: movie screen or other object with "up - down" movement
various pictures to put under screen or on flannel board

Procedure: Place pictures and/or objects on board. Say "1, 2, 3, Look and See."

Lower screen and have children take turns moving what is under the screen.

Change position of one object. Children identify the one that has been moved.

Put simple design on board, lower screen, have children draw it on individual blackboards, then raise screen and check.

Tracing Tracks

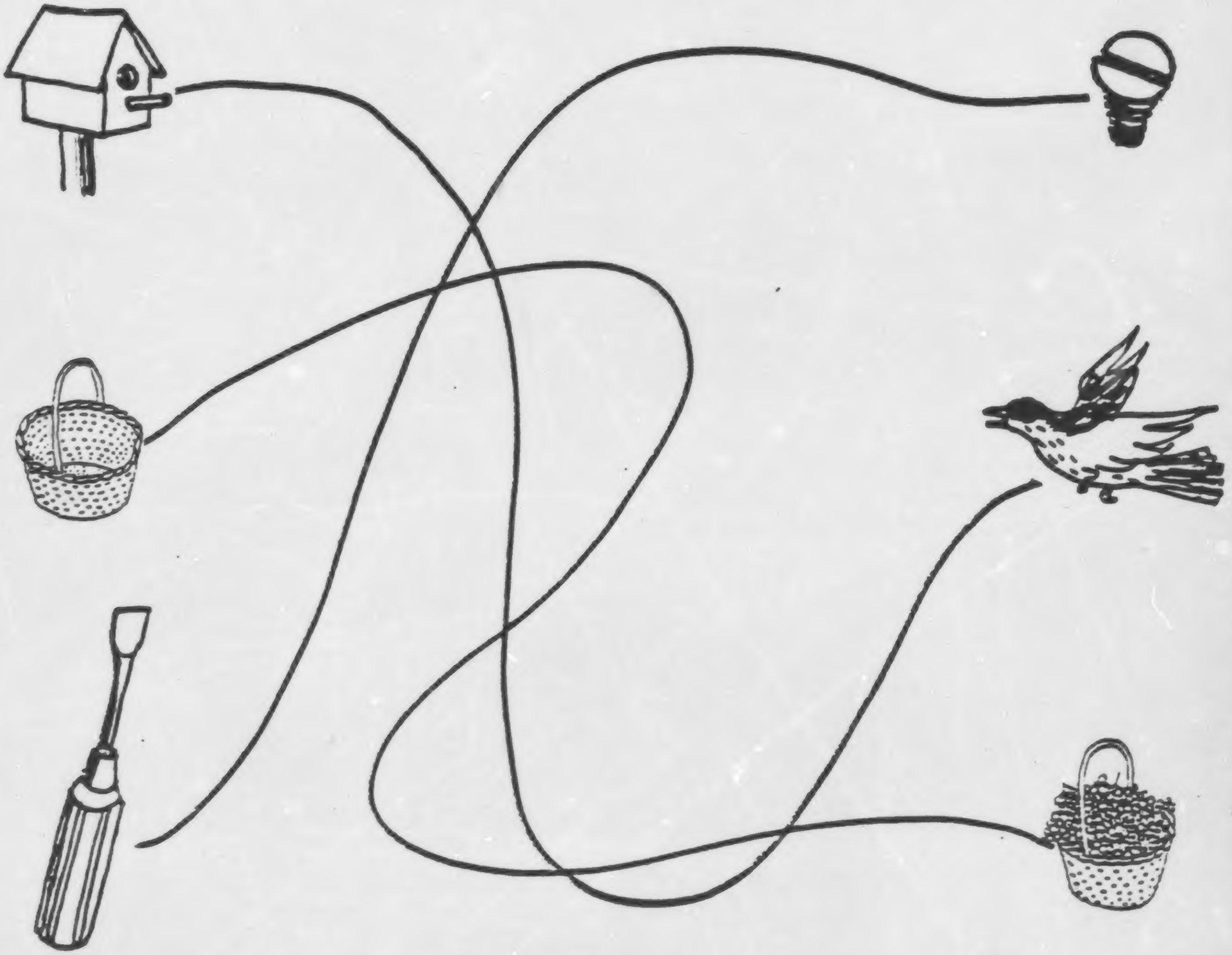
Materials: Tracing Tracks Booklet (included)

Procedure: At the beginning of the school day or at the start of a lesson, students sometimes need help focusing on a printed page.

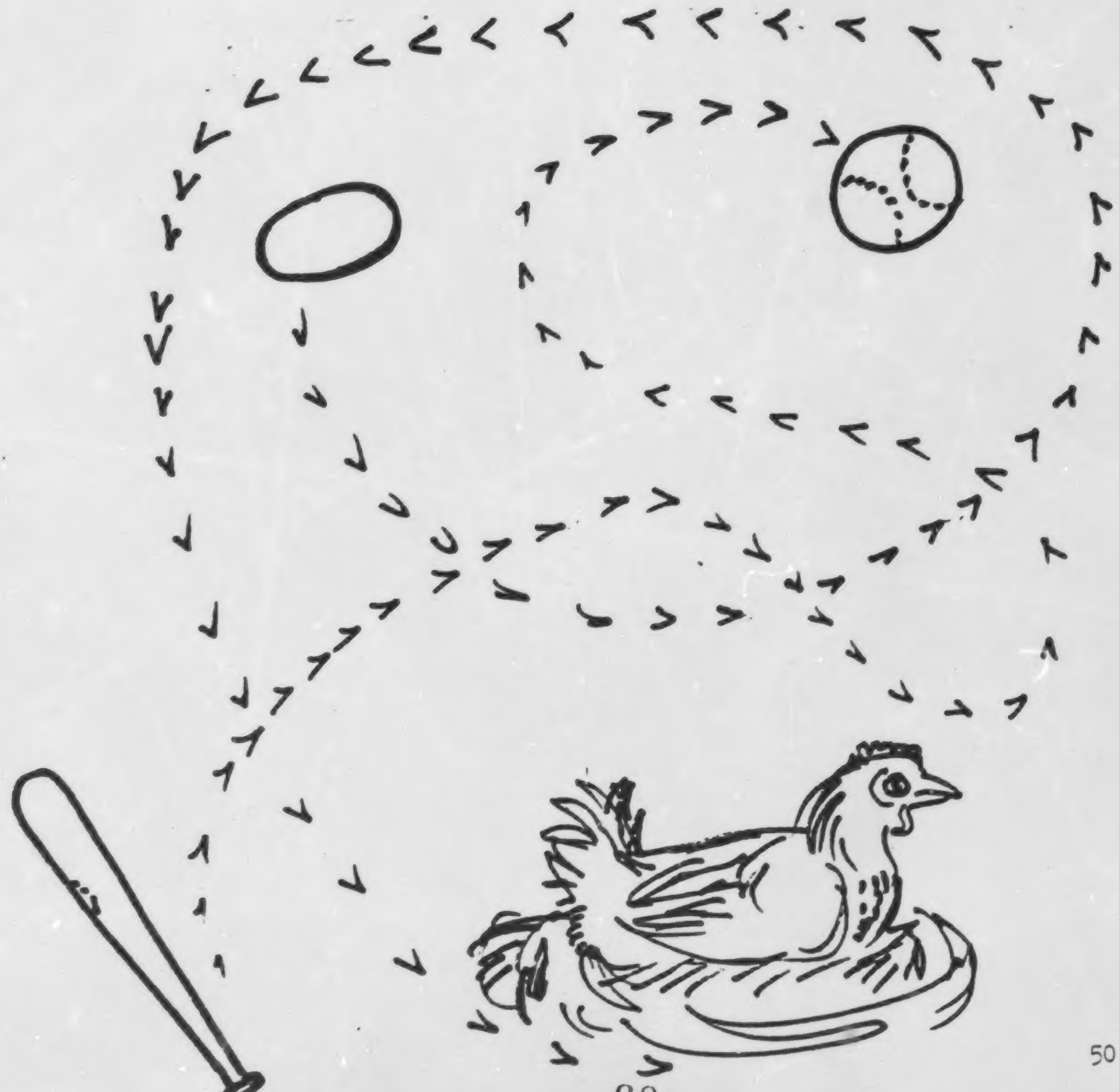
This booklet is designed to help students focus and track printed material. Booklets may be kept handy in students' desks.

Students trace each track with their finger. Sometimes students need assistance in not "switching" tracks at "intersections". Coloring each track a different color may eliminate this problem.

TRACING TRACKS



TRACING TRACKS



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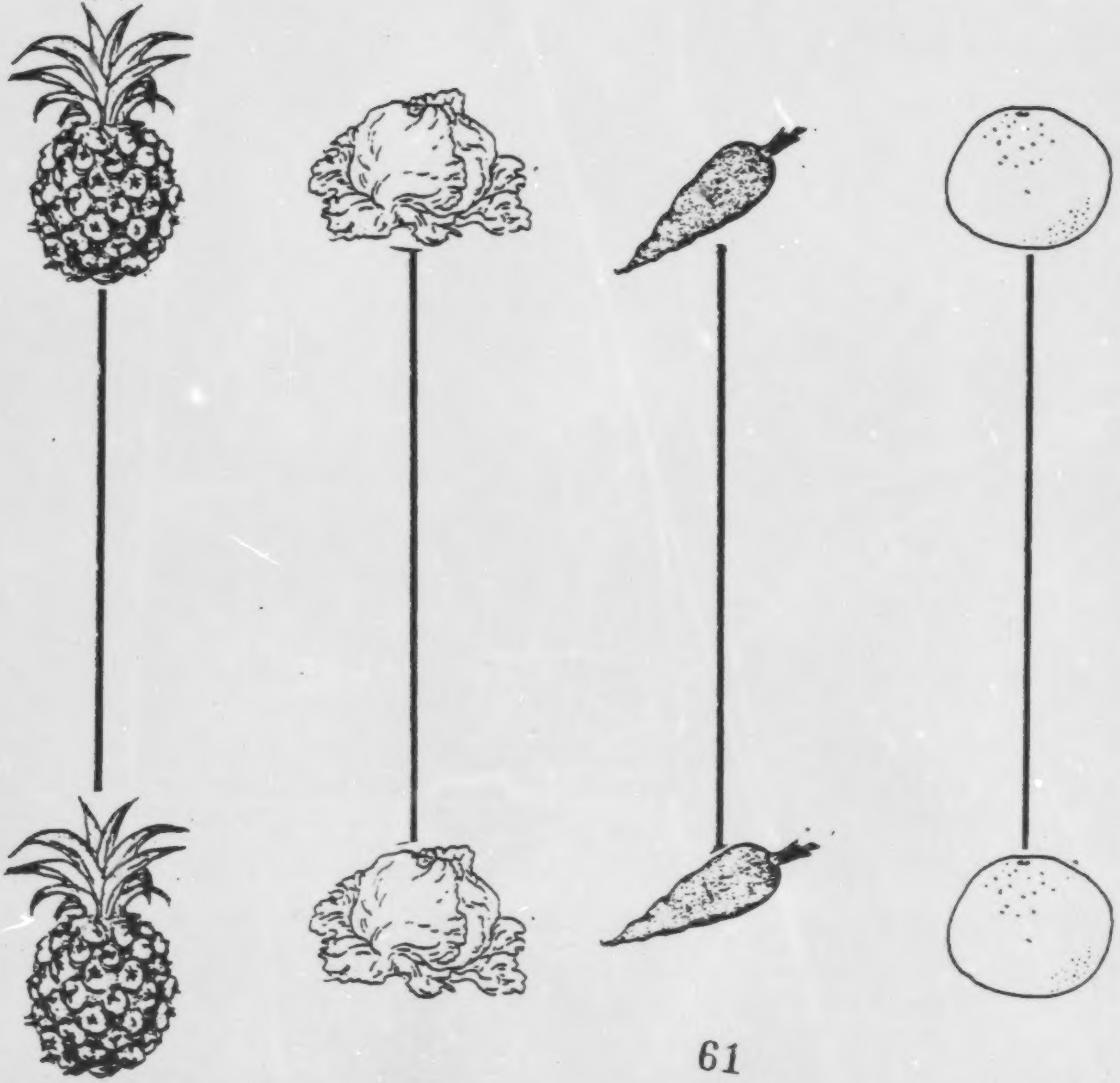

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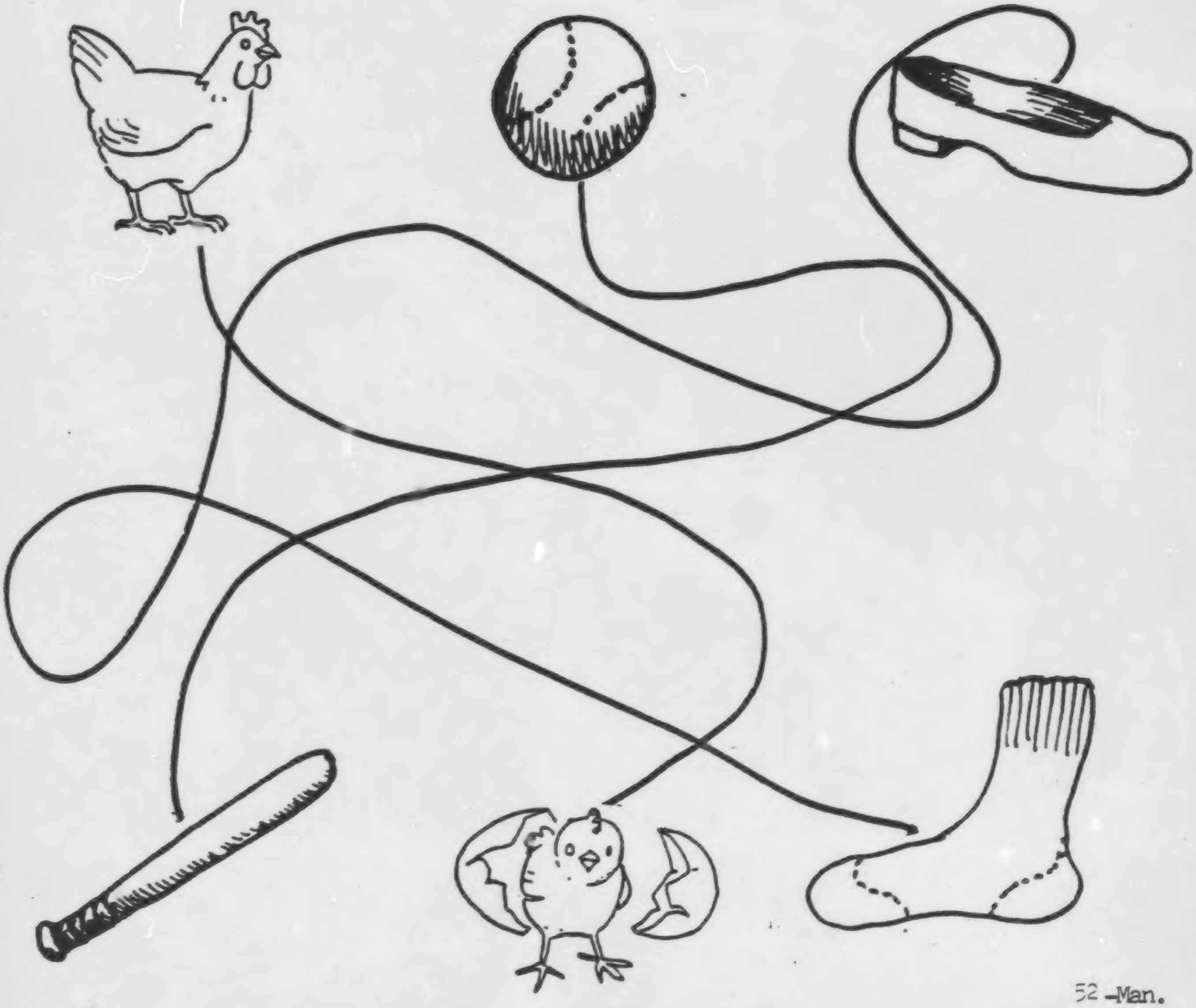
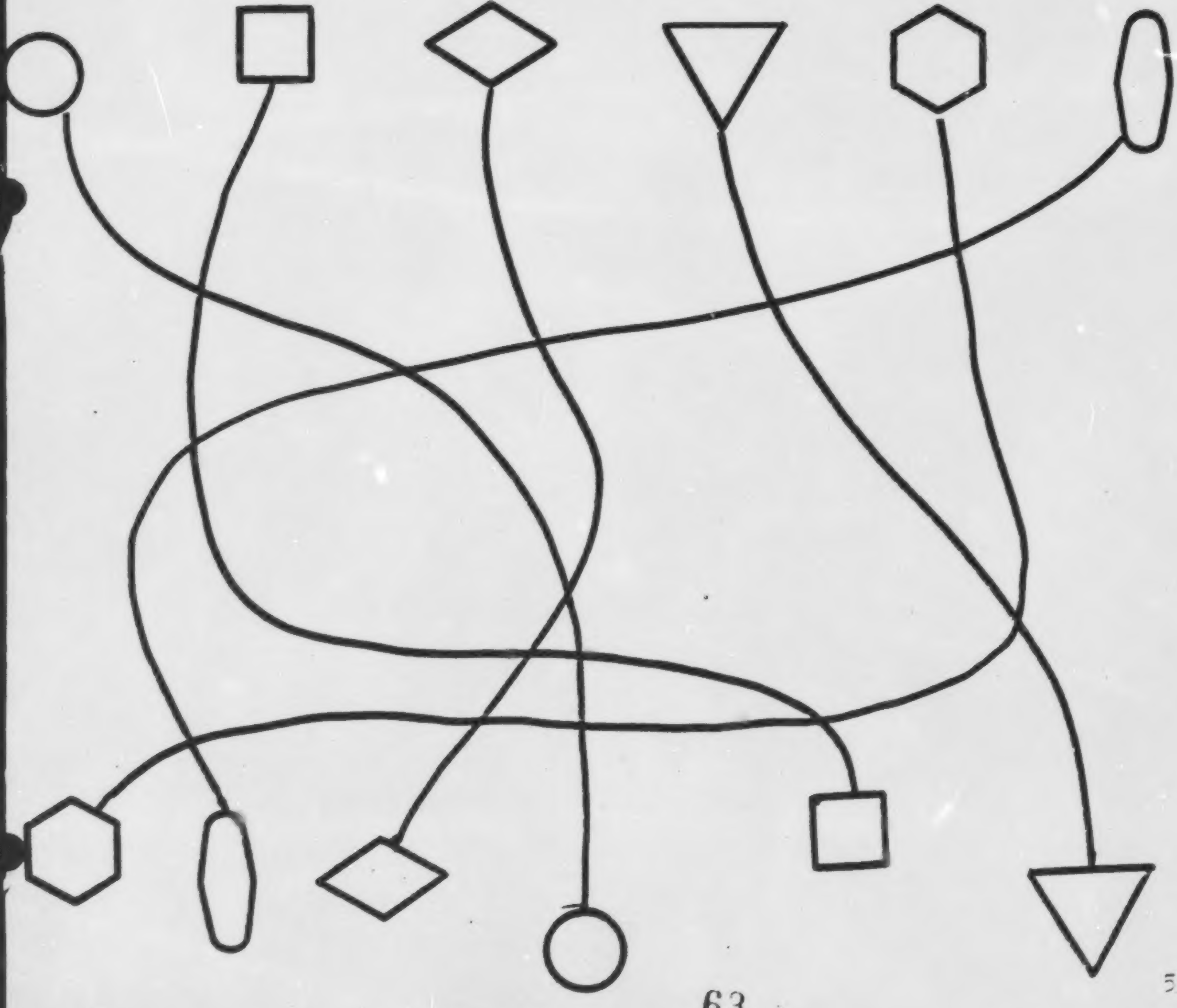
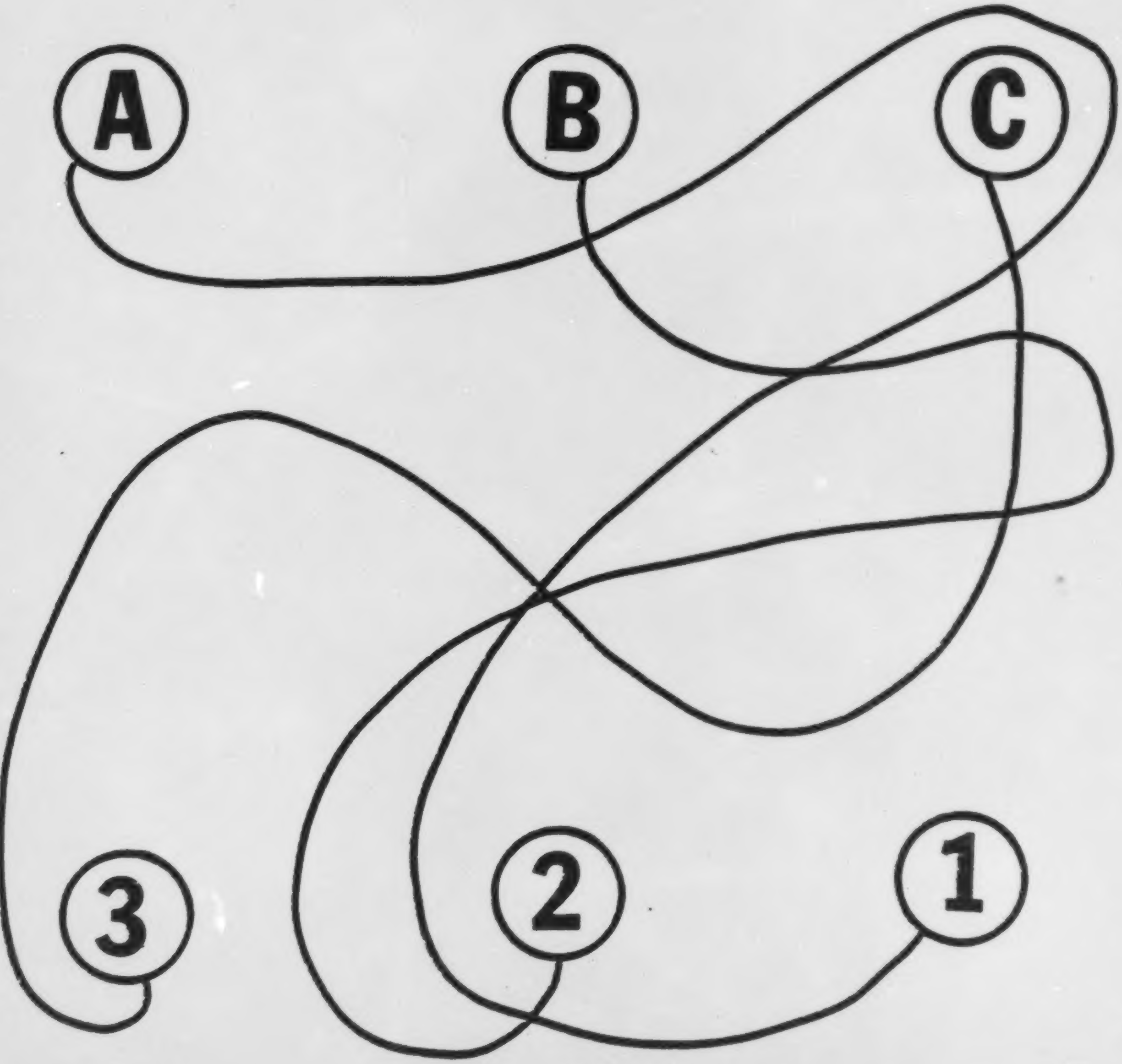


52 -Man.

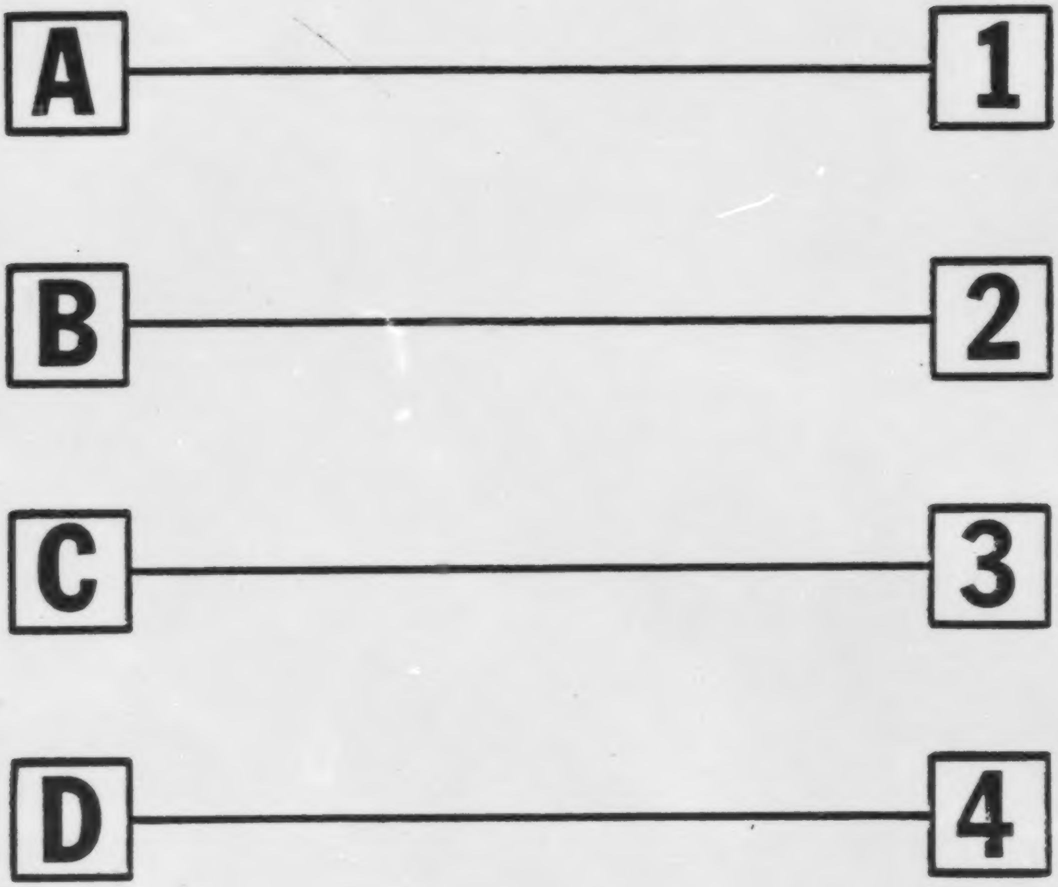
TRACING TRACKS



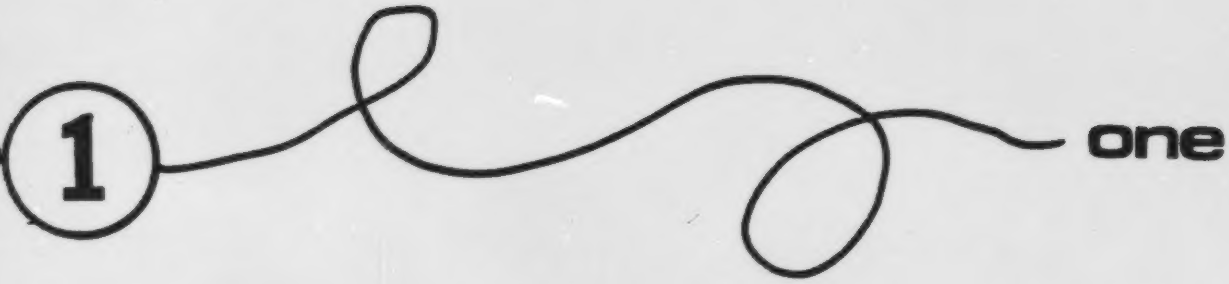
TRACING TRACKS

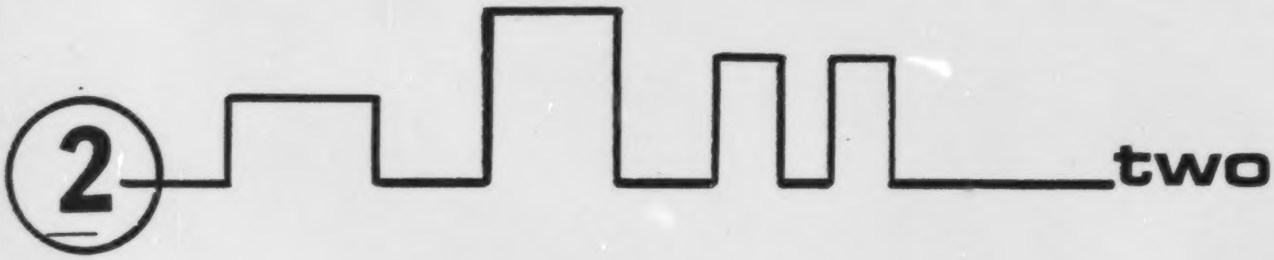


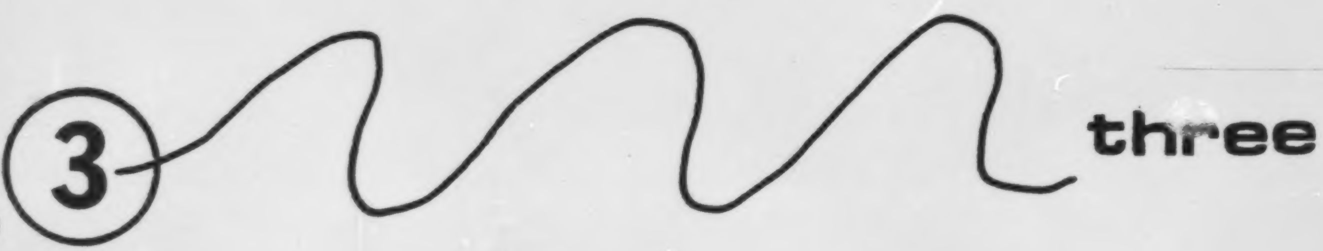
5-4 -Man.


A
1
B
2
C
3
D
4

TRACING TRACKS







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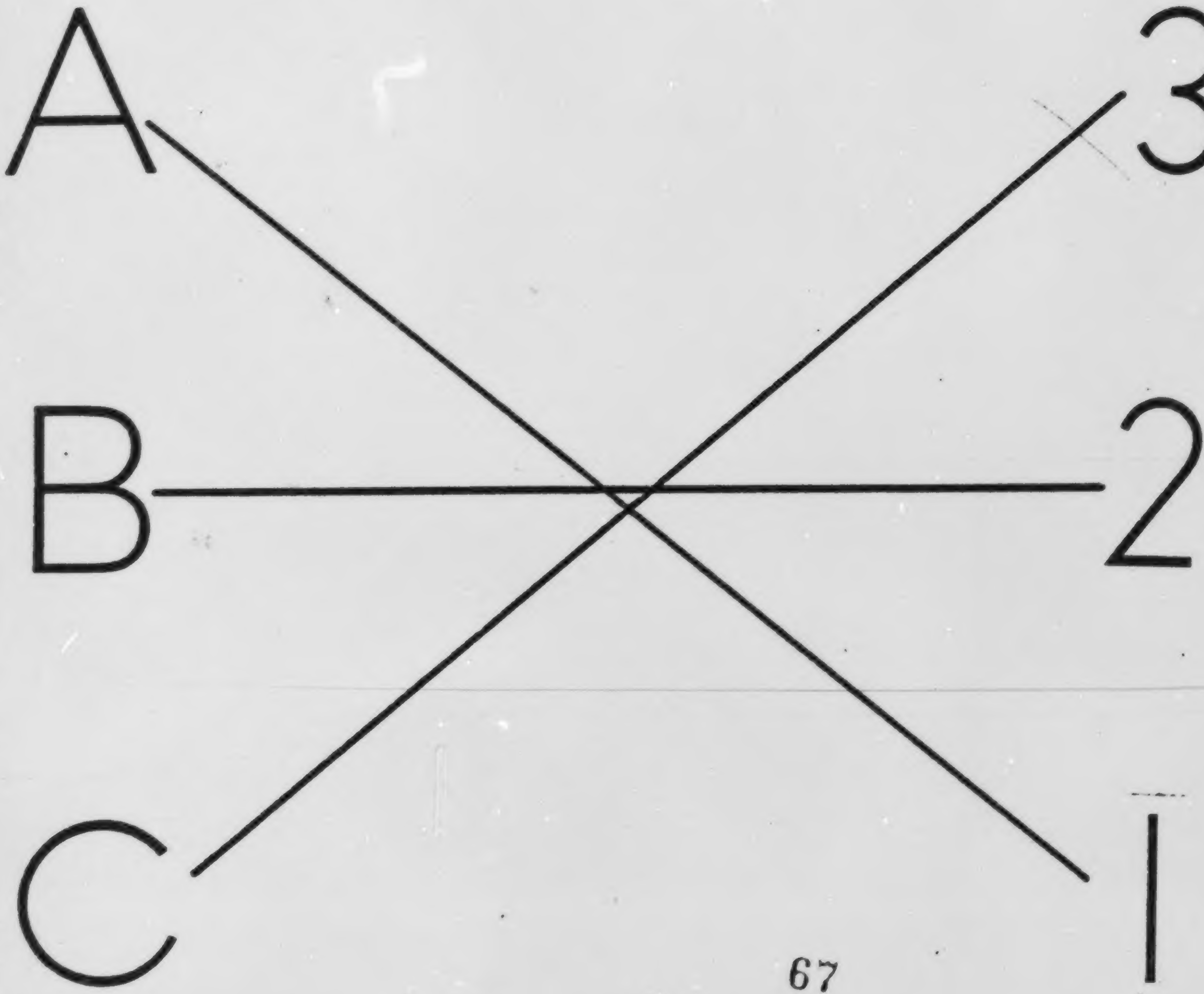

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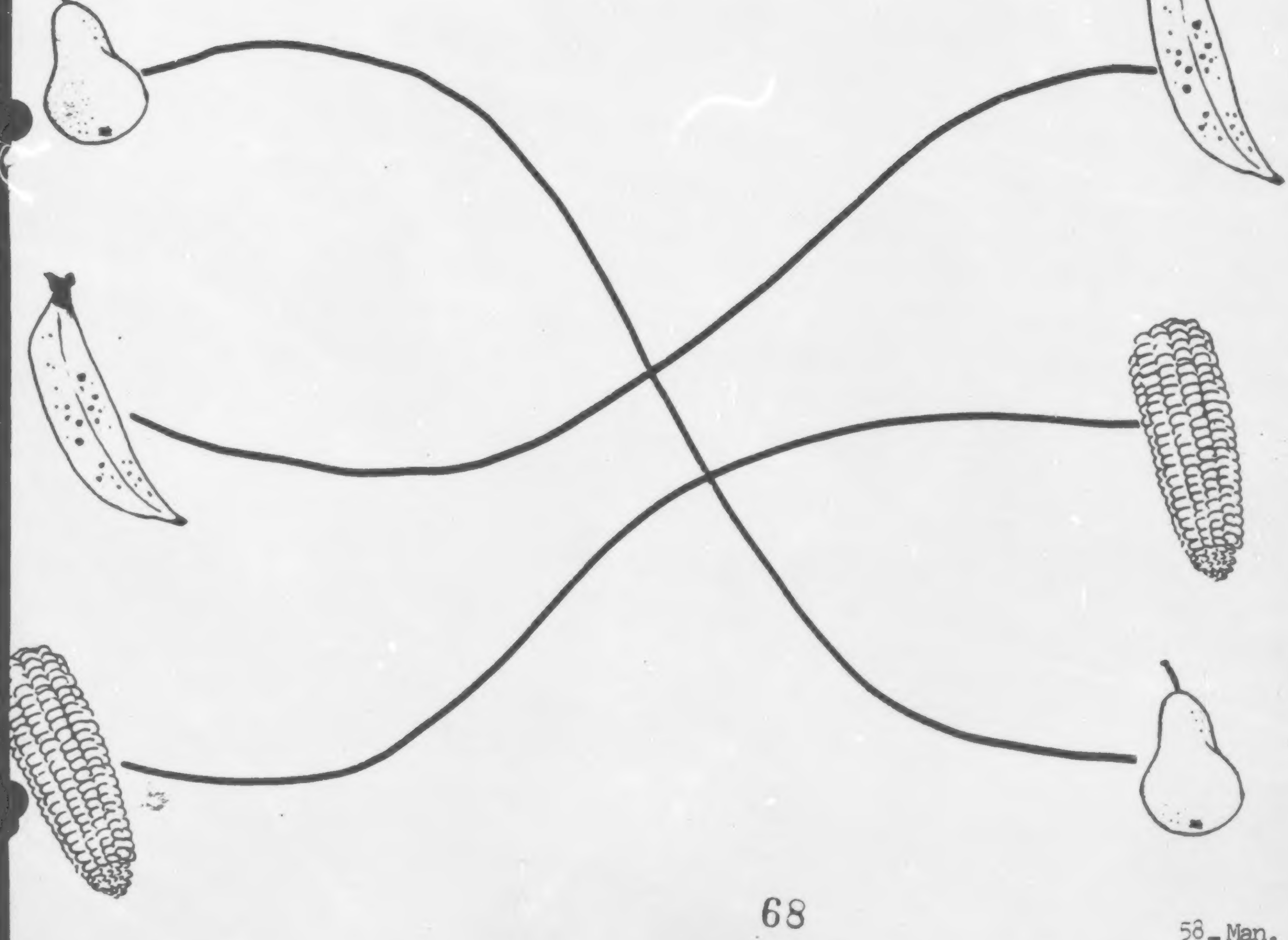

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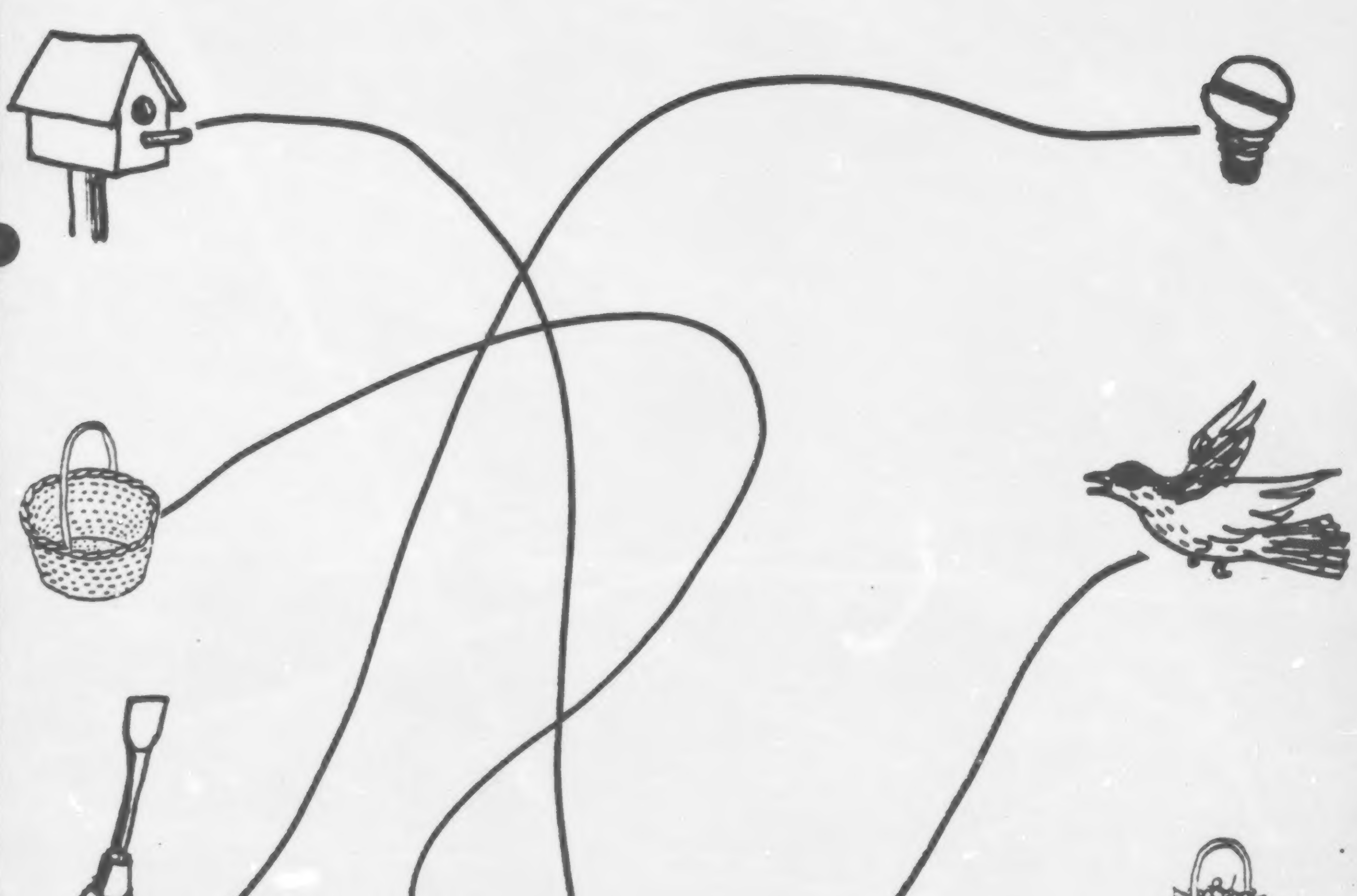

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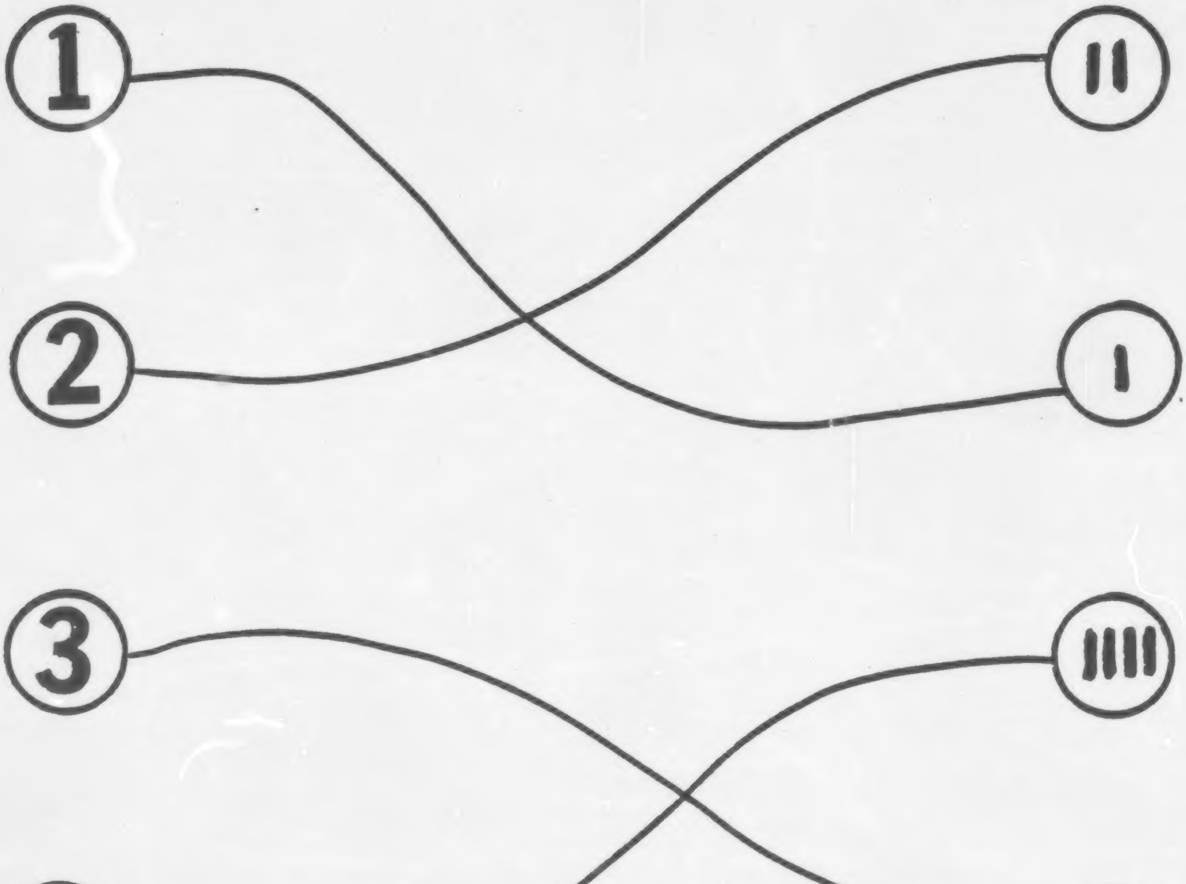
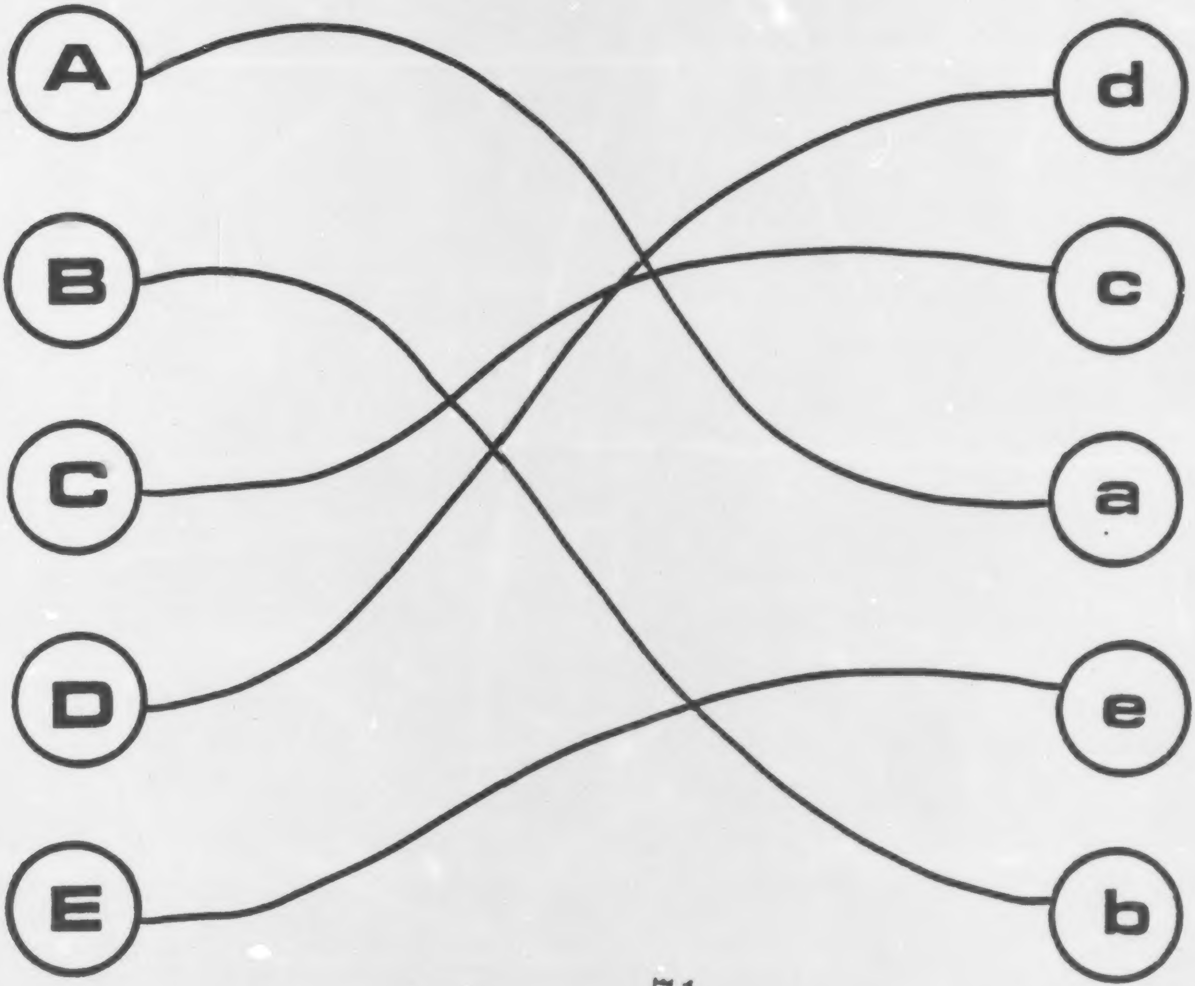

1
2
3
4
II
I
IIII
III

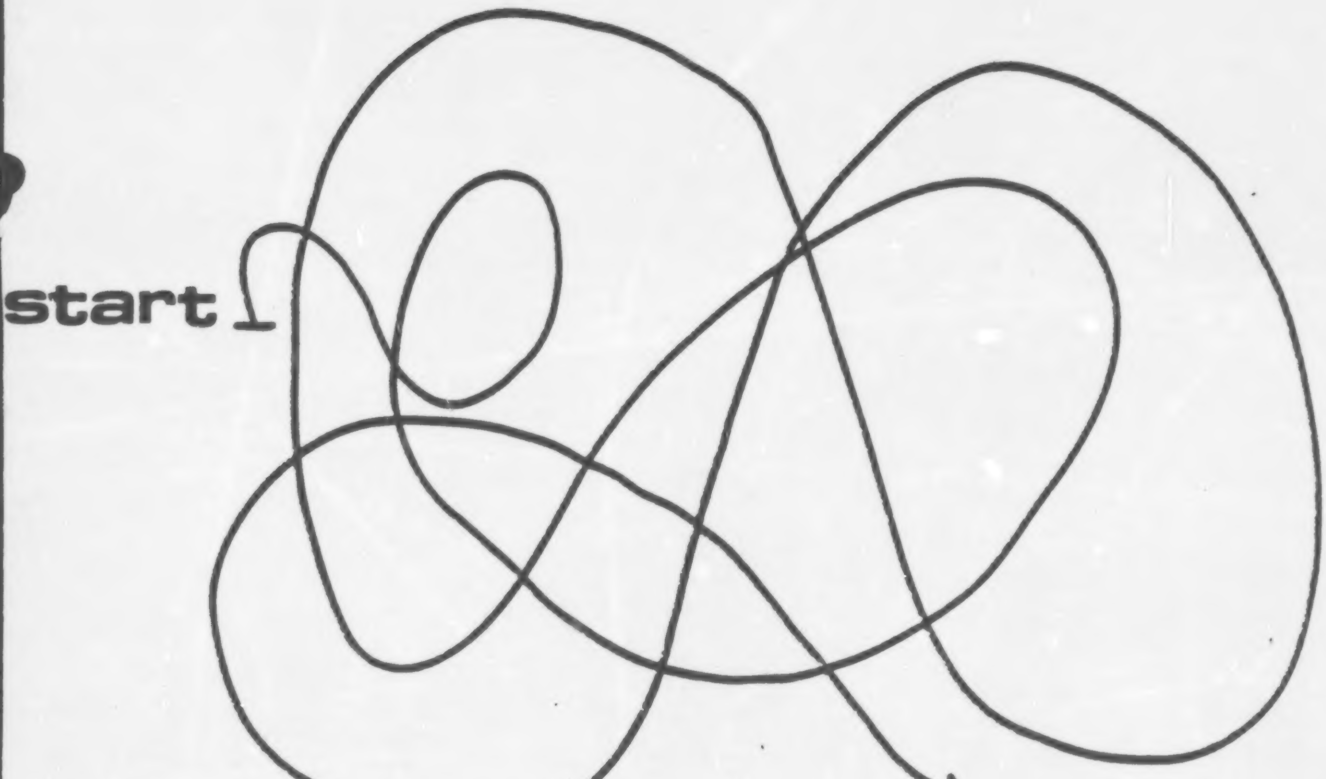
60-Man.

TRACING TRACKS


A
B
C
D
E
d
c
a
e
b

61-Man.

TRACING TRACKS



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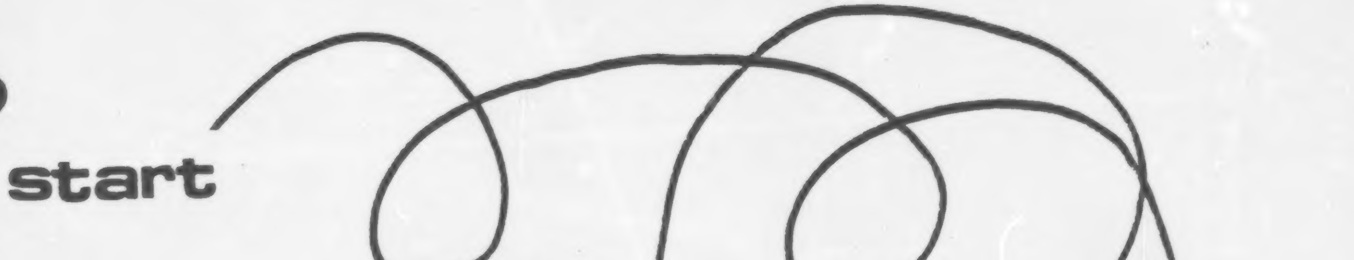
start
finish

PRESCHOOL

Before the program started, the preschool teacher met with each parent and child to:

1. Briefly explain the program
2. Acquaint the child with the room environment and materials
3. Administer the Cooperative Preschool Inventory (CPI) and project developed tests of brain hemisphere preference

After the pretesting was completed, individual and class skills profile charts were completed.

Each preschool student attended a two-hour class twice a week. Class size was limited to 12 students. Two consecutive two-hour classes were held on each preschool day so that a maximum of 24 students could participate.

Students were instructed as a total group, in small groups, and individually.

The preschool used a cognitively-oriented curriculum keyed to the information and skills assessed on the CPI.

Preschool materials were a part of a well structured, stimulating room environment. The environment was conducive to both teacher-directed lessons and free-exploration by students.

At the end of the preschool, the CPI and brain hemisphere preference tests were again administered individually.

Parent conferences were held to inform parents of their child's progress.

A graduation ceremony, complete with diplomas, mortar boards, and refreshments was held.

A TYPICAL PRESCHOOL DAY

8:30-9:00	Choice Time
9:00-9:15	Circle Time (on rug)
9:15-9:30	Table Time 1 (group lesson at tables)
9:30-9:40	Outside Games
9:40-10:00	Table Time 2 (group lesson)
10:00-10:10	Snack
10:10-10:30	Outside Play

CHOICE TIME:

puppets
books
filmstrips
listening post (read-a-long books and tapes)
games, puzzles, lacing boards
adding machines
typewriter
large building boxes
housekeeping area
dress-up area
playdough
sand table
painting on easels and water-painting outside walls

TABLE TIME:

Directed lessons to whole class:

1. seasonal/holiday activities
2. activities based on CPI
3. lessons based on day's snack

OUTSIDE GAMES AND PLAY:

"Farmer in the Dell"
"Looby Loo"
Listening-running games
Kindergarten playground equipment
Small vehicles

CIRCLE TIME:

Calendar activities
Name tags
Finger plays
Songs
Sharing

ndividual Student Profiles Based on
ooperative Preschool Inventory

1.0 YOU AND YOUR BODY (CPI 1-12)

____ name
____ age
____ address
____ telephone number

____ eyes
____ ears
____ nose
____ mouth
____ shoulder
____ elbow
____ hand
____ finger
____ knee
____ heel

____ raise hand
____ jump
____ wiggle

2.0 OBJECT RELATIONS (CPI 13-18)

____ number in a set
____ sizes (big & little)
____ in, on, under, behind
____ everything, some

3.0 ENVIRONMENTAL AWARENESS (CPI 19-24)

____ get sick
____ find boat
____ buy gas
____ eat breakfast
____ read something
____ find lion

4.0 JOBS (CPI 24-27)

____ mother
____ dentist
____ teacher

5.0 3DIMENSIONAL MOTIONS (CPI 28-30)

____ waterfall
____ phonograph
____ ferris wheel
____ clock

6.0 COUNTING (CPI 31-38)

____ eyes
____ hands
____ toes
____ bicycle wheels
____ tricycle wheels
____ car

7.0 COMPARISONS (CPI 39-41)

____ bigger-smaller

____ slower-faster

____ heavier-lighter

8.0 POSITION & ORDER (CPI 42-45

____ 1st

____ last

____ middle

____ 2nd

____ 3rd

9.0 MORE-LESS-SAME (CPI 46-48)

____ more

____ less

____ same

10.0 SHAPES (CPI 49-51)

____ ○ = wheel

____ | = stick

____ △ = tent

11.0 DRAWING SHAPES (CPI 52-55)

____ |

____ ○

____ □

____ △

12.0 COLORS (CPI 56-64)

____ red = apple

____ orange = orange

____ yellow = banana

____ green = grass

____ blue = sky

____ purple = grapes

____ brown = bear

____ black = night

"TEACHING FOR HEMISPHERIC INTEGRATION"

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TESTS OF HEMISPHERIC ABILITIES

TESTS OF HEMISPHERIC ABILITIES

Following are the two tests of hemispheric ability. These tests have been printed on full sheets of cardstock and designed so that each sheet can be cut in half, resulting in 5 x 8½-inch cards for the instructions, age equivalents, and test items.

The Test of Left Hemisphere Ability will consist of four cards, including the instructions, a raw score to age equivalent conversion chart (both graph and table), the example item through item 14, and items 15 through 25.

The Test of Right Hemisphere Ability will consist of 23 cards including the instructions, a raw score to age equivalent conversion chart (both graph and table), the example, the completed version of the example, and items 1-19 (one item per card).

Also there is a form that can be duplicated and used to record test responses. The form is numbered 1-25 so that the responses and scores of an entire group or class can be recorded on a single sheet for each test. For the left hemisphere test, record 2, 1, or 0 in the appropriate boxes, 1-25. For the right hemisphere test, record + or - in the appropriate boxes, 1-19.

	TEST RESPONSES																	Rt. Hem. Test						Left Hem. Test
Students' Names	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1.																									
2.																									
3.																									
4.																									
5.																									
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32.																									
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34.																									
35.																									

TEST OF LEFT HEMISPHERE ABILITY

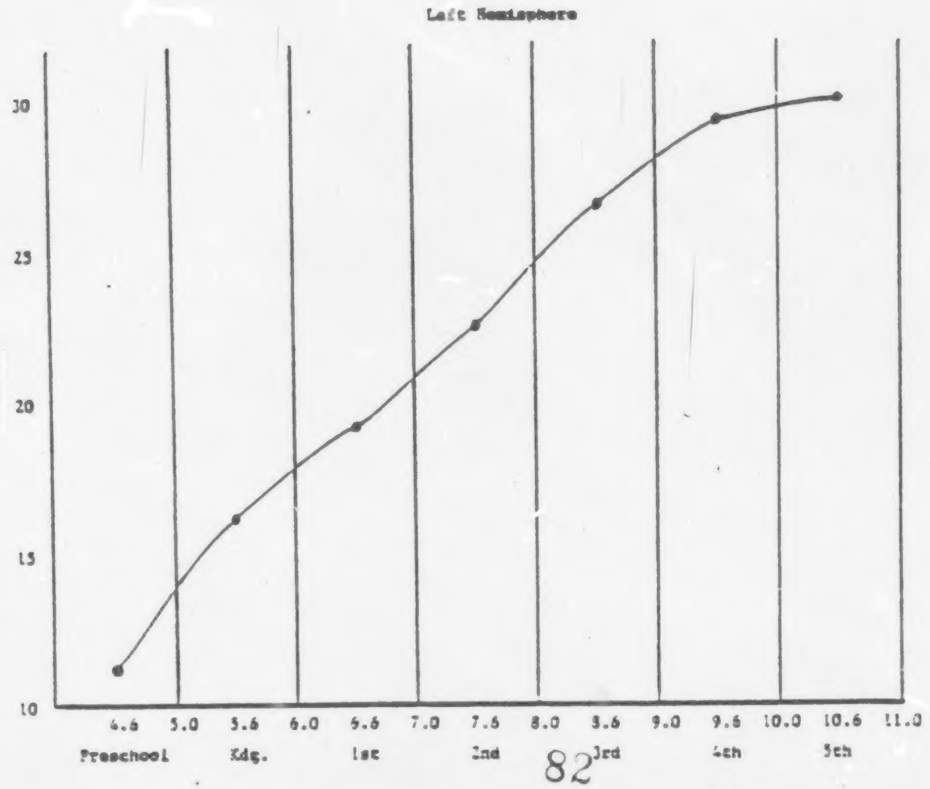
Instructions

Begin with example. "I am going to say a sentence. Listen carefully, wait until I finish, and then say the sentence exactly the way I said it." Be sure the student understands, then start with test item one using the following procedure.

Read the sentence without inflection and allow the student an opportunity to repeat it. If the sentence is repeated correctly* score two points. If the sentence is said incorrectly** read the sentence a second time. If the sentence is then repeated correctly score one point. If the sentence is still said incorrectly, score zero. Discontinue after five consecutive zero scores.

* A sentence must be repeated word for word and in the exact same order as the sentence read to be correct. Minor sound pronunciation differences (i.e., r's, w's, slurring, dropping end sounds, etc.) should not be considered errors if it is evident that the correct word is intended.

** Sentences are incorrect if: 1) any word is omitted; 2) any word is added; 3) any words are in a different order; 4) any words are used in substitution; 5) any word is grossly mispronounced; 6) any word is clearly changed in form (i.e., singular to plural, past to present, etc.).



Score	Age Equiv.
10	B.N.
11	4.6
12	4.8
13	4.10
14	5.0
15	5.2
16	5.6
17	5.9
18	6.1
19	6.6
20	6.9
21	7.0
22	7.4
23	7.7
24	7.10
25	8.1
26	8.4
27	8.7
28	9.0
29	9.4
30	10.6
31	A.N.

LEFT HEMISPHERE TEST

Example: The dog ran down the street.

1. This is it.
2. That is true.
3. Knowledge is important.
4. Now is the time.
5. What a perfect idea.
6. This was certainly interesting.
7. It seems to be late.
8. There are always some mistakes.
9. That was an unbelievable experience.
10. How could that have been known?
11. The reasons are never quite evident.
12. Exactly when did the events occur?
13. It has been repeated time and time again.
14. There are obvious advantages to being early.

15. Concepts such as these are often difficult.
16. The value of this method cannot be determined.
17. A suggestion of this kind deserves serious consideration.
18. There are moments when respect is not the issue.
19. This particular process seems to last an entire day.
20. In spite of the opportunities, nothing worthwhile has been accomplished.
21. Determine the possibilities, consider the consequences, then make a decision.
22. These conditions are believed to have existed millions of years ago.
23. The development of creative ability requires discipline as well as freedom.
24. The proposed remedy is likely to be effective, but not necessarily appreciated.
25. No doubt it was accurate, factual and consistent with the previous version.

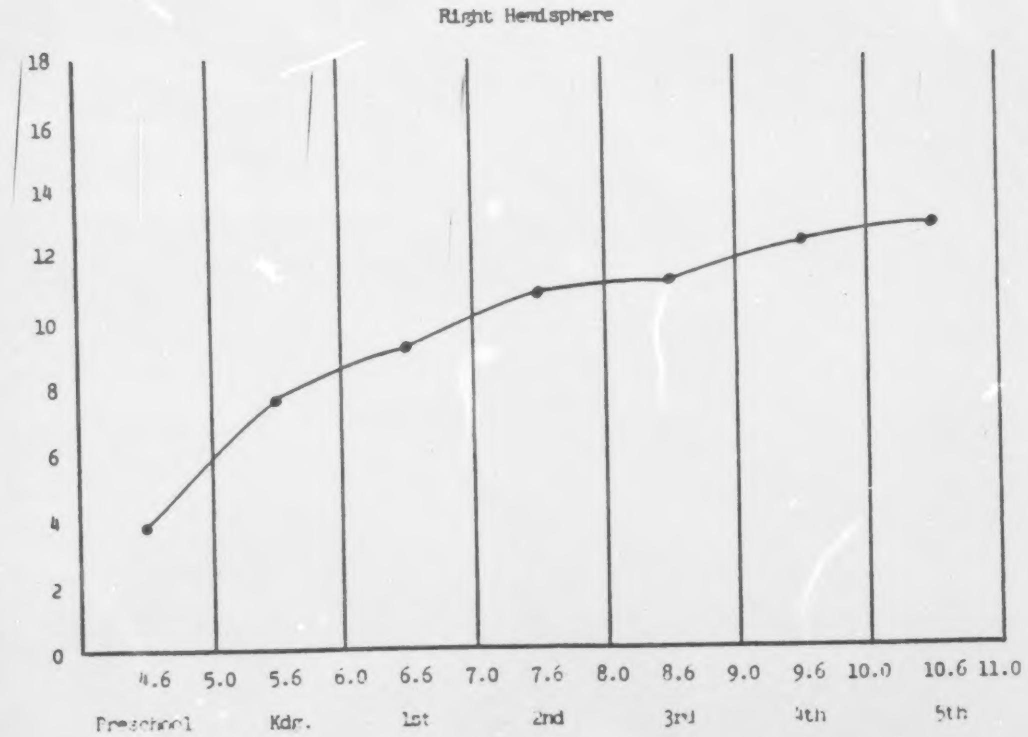
TEST OF RIGHT HEMISPHERE ABILITY

Instructions: Begin with example. "This picture is not complete. Can you tell what it is?" Allow student a few seconds to answer, be sure they understand that it is a dog, and show the completed version on the next page. Proceed with test items asking: "What is this?"

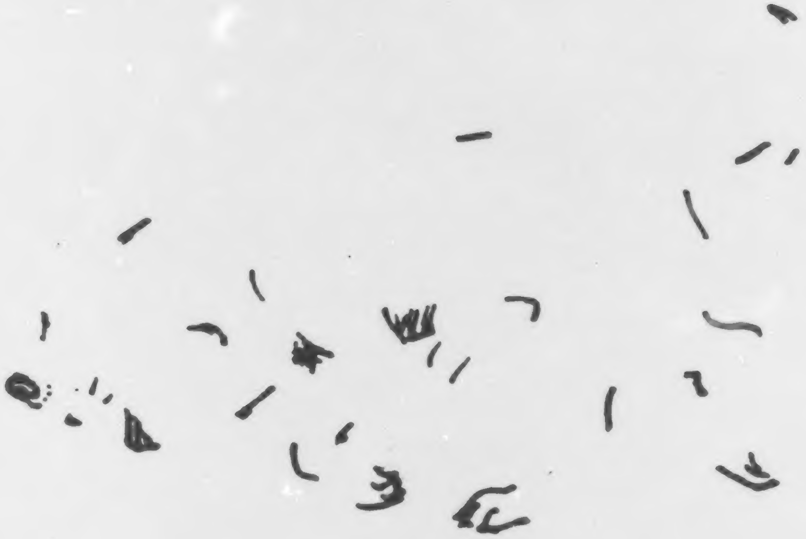
TEST OF RIGHT HEMISPHERE ABILITY

Answers

1. House, cabin, barn, dog house
2. Umbrella
3. Deer, doe, fawn, reindeer
4. Ice cream cone, cone, ice cream
5. Dog
6. Owl (if answer is bird, ask what kind)
7. Apple, peach, nectarine, pumpkin (if answer is fruit, ask what kind)
8. Cat, lion, tiger
9. Pig
10. Bird
11. Boat, ship
12. Orange, lemon, grapefruit
13. Star
14. Candle
15. Horse
16. Rabbit, bunny
17. Leaf
18. Shoe
19. Cup, mug



No. Right	Age Equiv.
3	BN
4	4.6
5	4.9
6	5.0
7	5.3
8	5.6
9	6.6
10	7.0
11	7.6 - 8.6
12	9.6
13	10.6
14	AN



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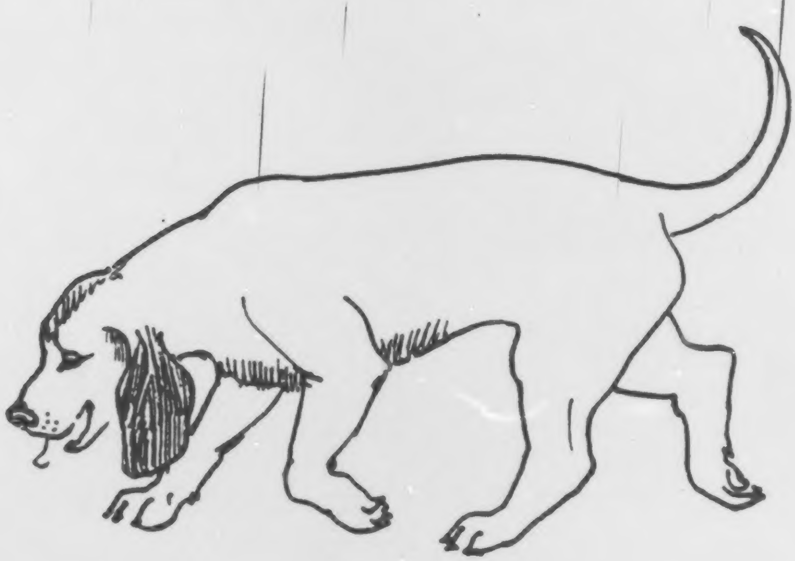

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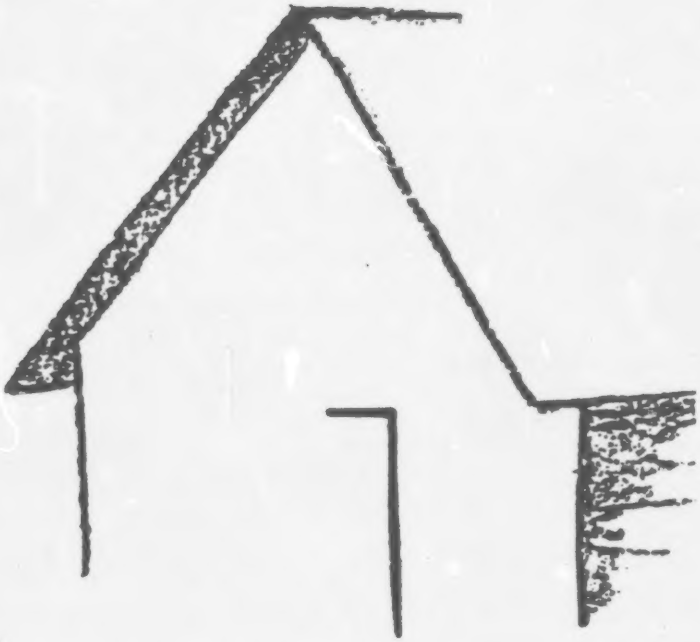

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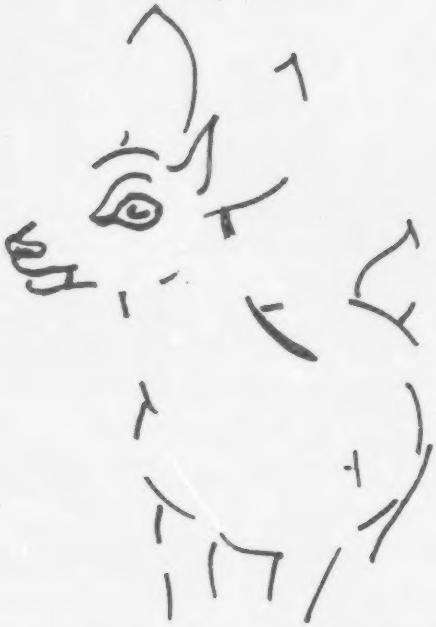

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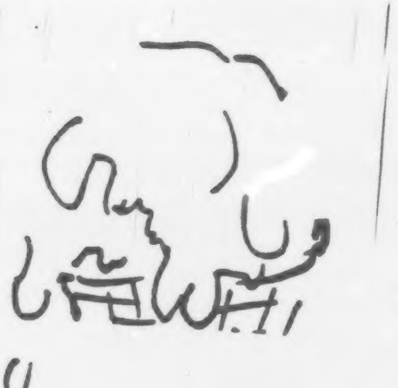

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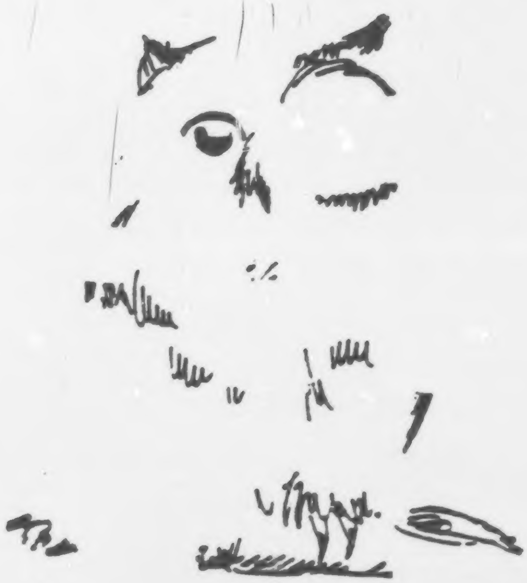

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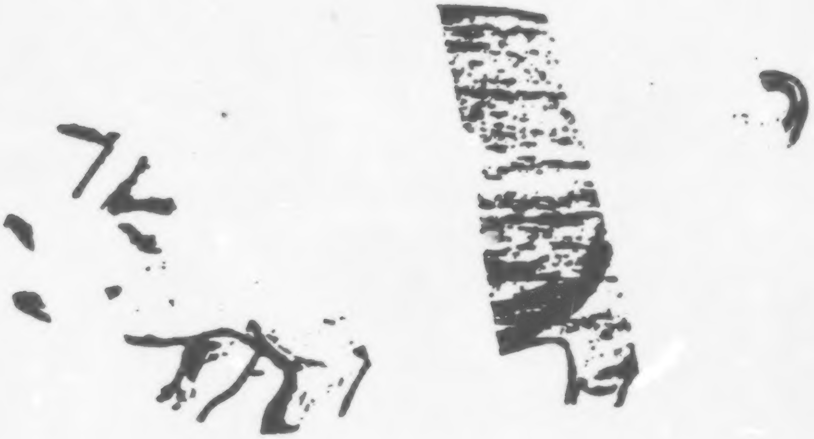

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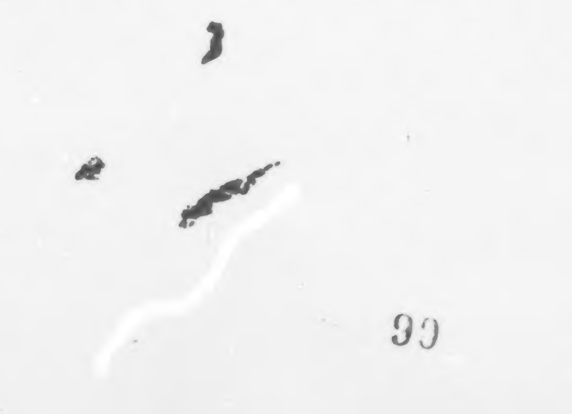

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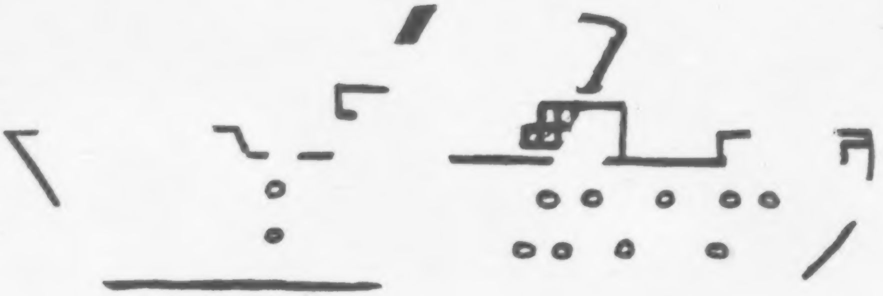

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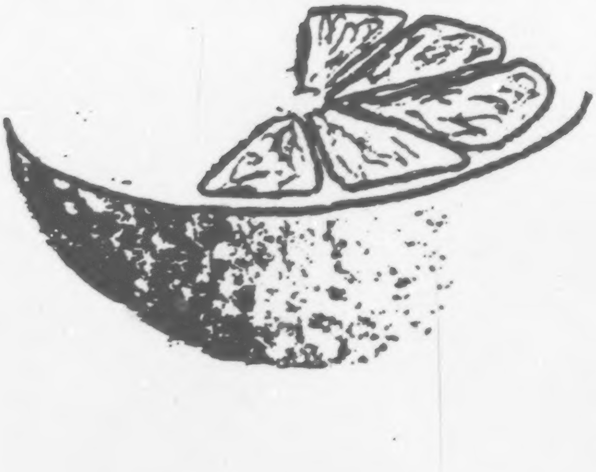

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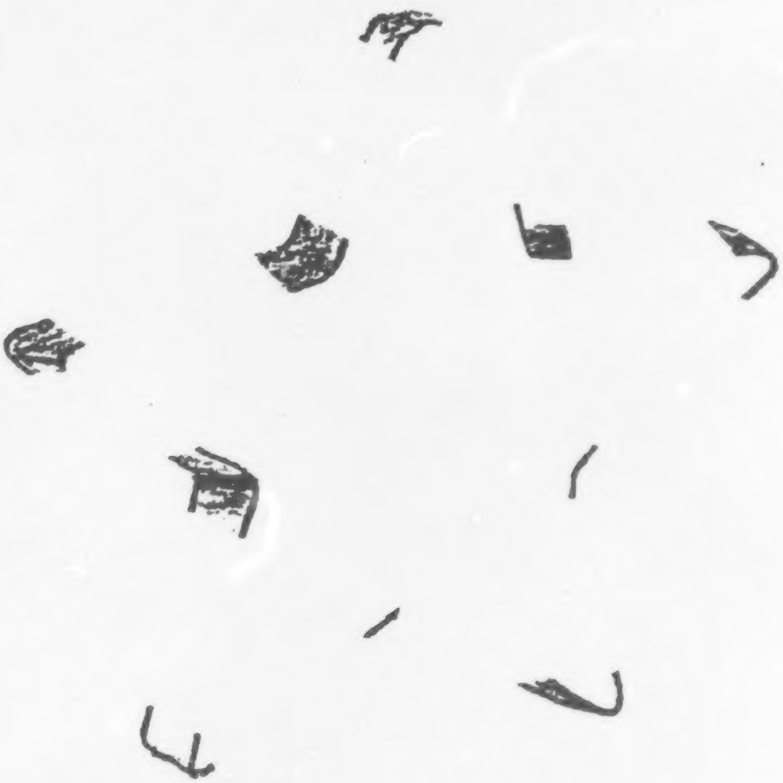

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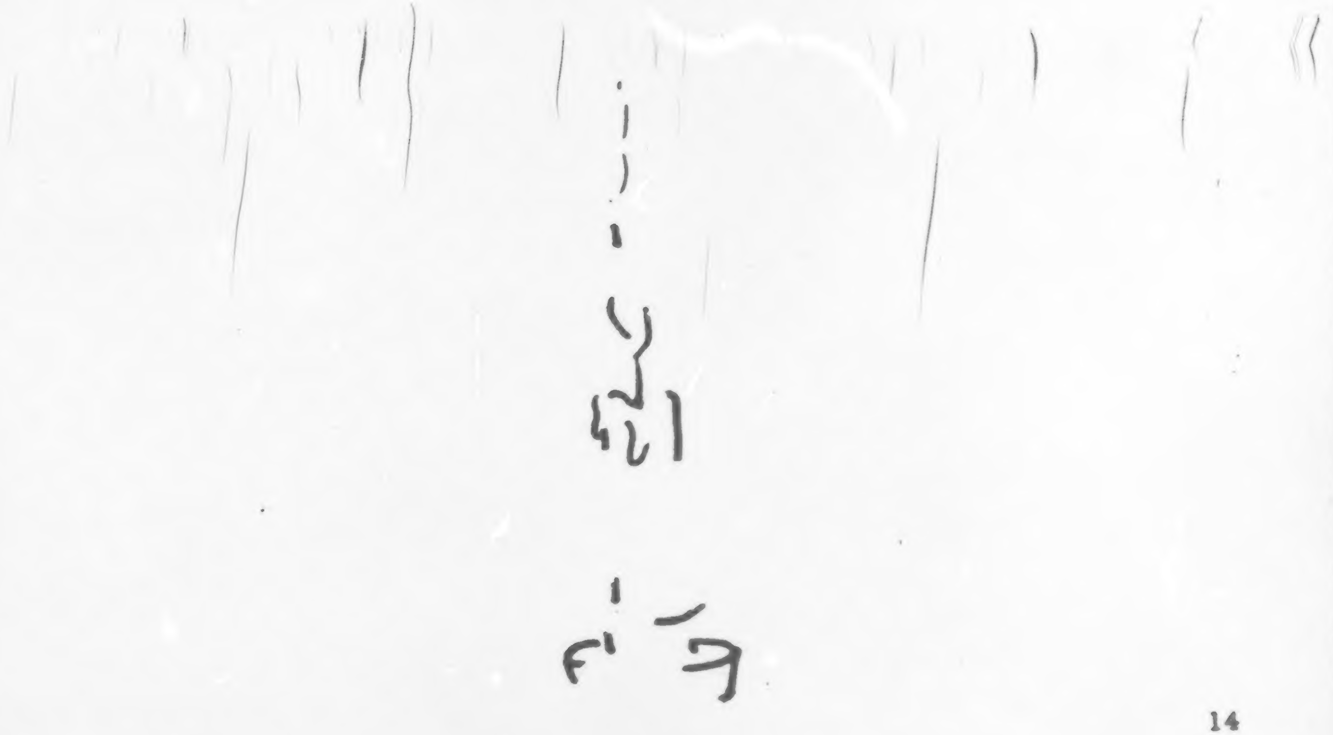

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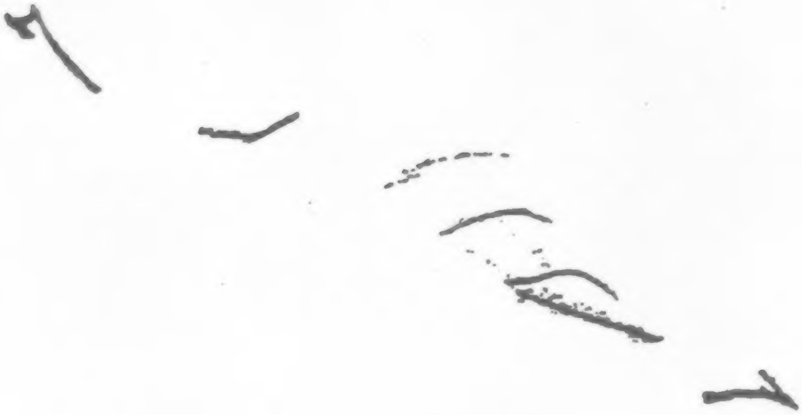

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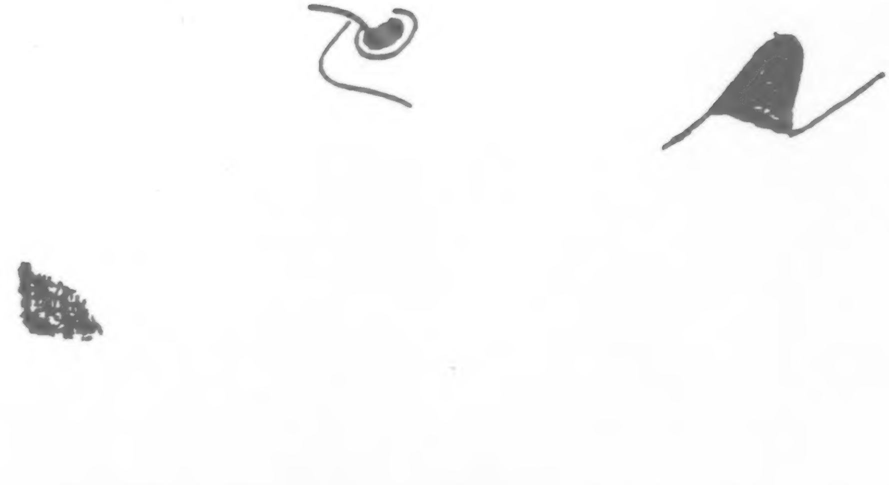

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BRAIN HEMISPHERE ACTIVITIES

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LEFT BRAIN HEMISPHERE ACTIVITIES

BRAIN BOXES

OBJECTIVE: Classifying objects by meaning

MATERIALS: Brain Boxes may contain any of the following:

adhesives
containers
fabrics
fasteners
measuring tools
papers
tools
utensils
round things
buttons
rocks
leaves
ropes
chains
hinges
seeds/pits
shells
keys
clothing
shapes
colors
Attribute Blocks
Pattern Blocks
artificial food
plastic toys (animals, fruit, etc.)

PREPARATION:

Gather objects listed in categories above. Similar items are put in shoe boxes. These become the "Brain Boxes".

ACTIVITY:

◑Individual students or groups of students get a Brain Box.

◑Students shake the box to guess its contents.

●Students open the box and explore its contents.

●Teacher asks open-ended questions about the contents:

"Have you seen any of these before?"
"How would you use this?"
"Where would you go to find something like this?"
"How are these two things alike?"
"How are all these things (3-6 items) alike?"

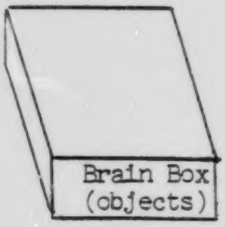
◐Students classify objects into groups.

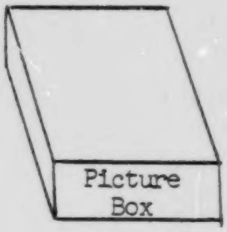
◑Students draw a picture of one of their classification groupings.

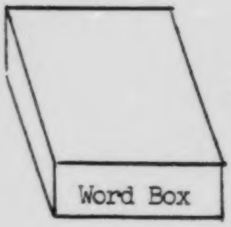
OBJECT-PICTURE-WORD BOXES

OBJECTIVES: Selecting pictures and/or spoken words related through meaning
Selecting words related through meaning

MATERIALS: Brain Box (box contains objects listed in "Brain Boxes" activity)
Picture Box (contains pictures of objects in "Brain Box")
Word Box (contains word cards that label objects in "Brain Box")







PREPARATION:

Choose a Brain Box (i.e., plastic animals).

Make pictures and word cards for each object.

Place the picture and word cards in separate boxes.

ACTIVITY:

- Students match objects in the Brain Box with pictures from the Picture Box, and with words from the Word Box.

SEQUENCING PICTURES

OBJECTIVES: Sequence pictures in logical order
Express orally a story based on the sequenced pictures

MATERIALS: 8 ½" x 11" paper
glue
scissors
pencils
Sequencing Picture Sheets (included)

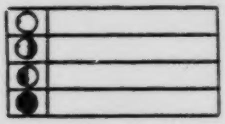
PREPARATION:

Duplicate sequencing sheets, make picture cards (cut on dotted lines), and give one set of sequence cards to each student.

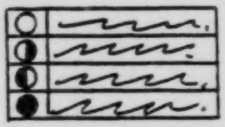
ACTIVITY:

◑Students fold an 8½" x 11" sheet in fourths lengthwise.

◐Students arrange four picture cards down the left side of the paper in logical order.



◐Student explains the sequence to the teacher.
◑Student glues the cards on the paper.
◐Student and/or teacher writes at least one sentence for each picture.
◑For the more abstract figures, students visualize them as a common object (i.e., circle might be a snowball)



●Student reads the sentences to the class.

VARIATIONS:

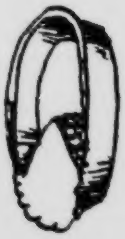
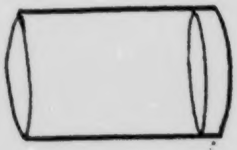
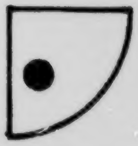
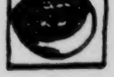
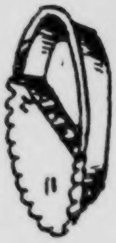
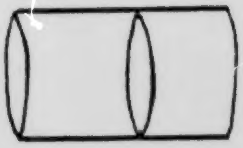
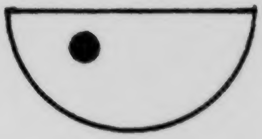
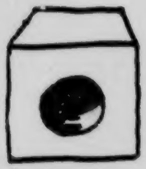
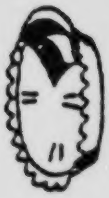
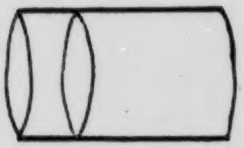
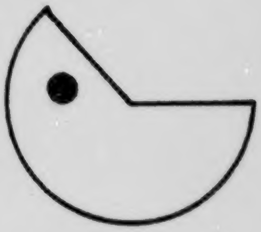
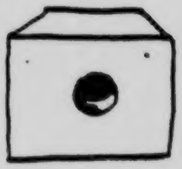
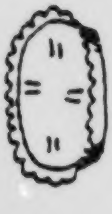
A unique picture may replace one of the three pictures. Students incorporate that anomaly into a story.

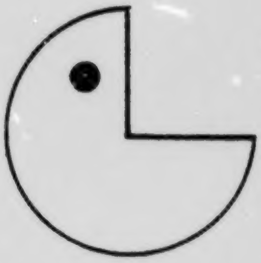
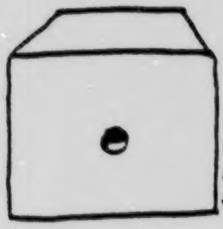
Students sequence four seemingly unrelated pictures and create a story about them.

The three sentence strips may be cut apart, mixed up, put in order, and reread.

Students may pantomime their picture sequence.

SEQUENCING PICTURES

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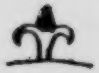
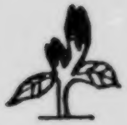
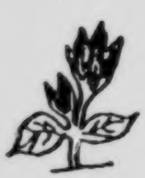
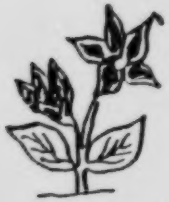
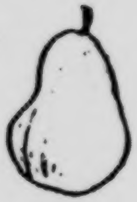
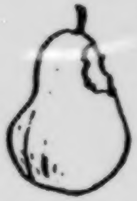
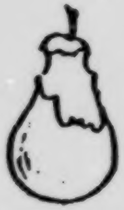
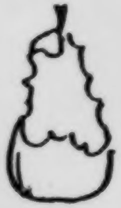
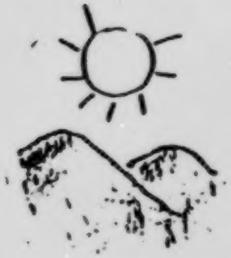
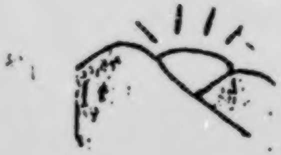
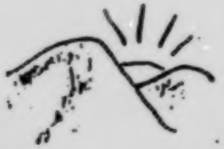
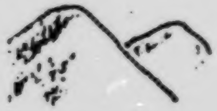
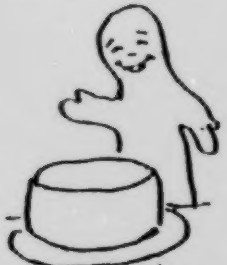
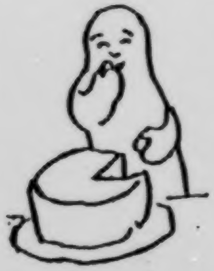
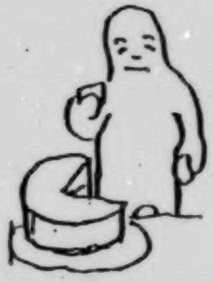
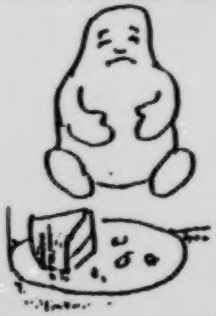
SEQUENCING PICTURES

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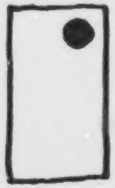
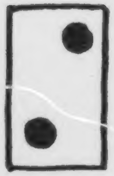
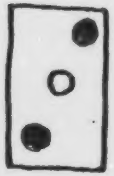
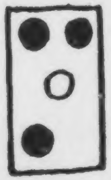
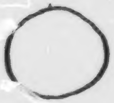
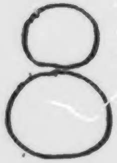
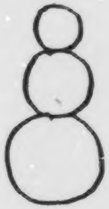
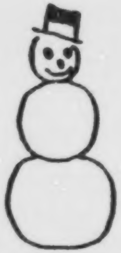
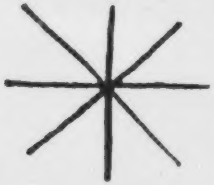
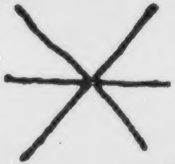
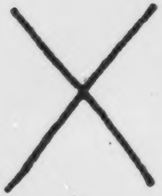
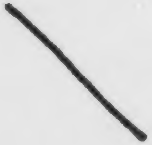
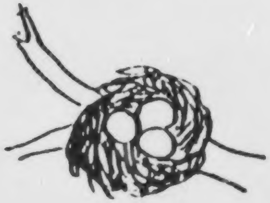
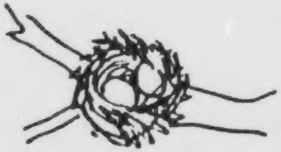
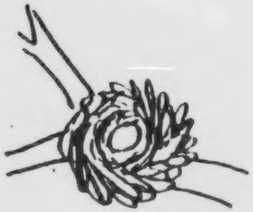
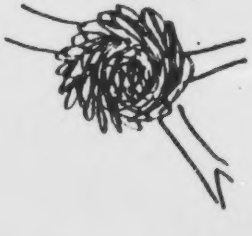

















SEQUENCING PICTURES

6-LB

SAY WHAT I SAY

OBJECTIVES: Develop memory for auditory language

MATERIALS: List of sentences (included)

ACTIVITY:

◐ Sentences are read aloud to student.

◐ Student repeats sentences.

"SAY WHAT I SAY" SENTENCES

It is new.

They went away.

That is false.

The time is past.

That is a perfect example.

What an absurd objection.

It appears to be logical.

Honesty is important.

Precisely which of the conditions are relevant?

Several conclusions can be made.

Candor is obligatory in this instance.

An excess of alliteration obscures meaning.

Envy has an adverse effect on personality.

The reason for that aphorism is not evident.

This represents an accurate response.

Consider the changes in the nature, quantity, and status of science.

Suspension of judgment is not always an advantage.

This experiment has apparently not been attempted.

There are interaction effects between constructive and destructive criticism.

There is a sharp distinction between active and passive concept formation.

An analysis of the issue should precede a hypothesis of the expected outcome.

The amount resulting from the programs was greater each year.

This is an excellent example of testing for both translation and interpretation.

The three levels of comprehension are translation, interpretation and extrapolation.

The second criterion of evaluation concerns the number of dichotomies that can be made.

The two subcategories in this category are practically self-explanatory.

"SAY WHAT I SAY" SENTENCES

It is important to be aware of the sound, morphology and syntactic repertory of language.

The leader needed to be strong enough to impose the unity and trust that the conditions of devastation demanded.

He had to be wise enough to dispense with the rigid and sometimes inflexible rituals of the past.

The pronouncements of national groups are fairly unanimous on the ideal objectives of science education.

The earlier discussions of these categories referred to such processes of scientific inquiry as making observations and measurements.

SENTENCE MEMORY MULTIPLE CHOICE

OBJECTIVE: Develop memory for auditory language

MATERIALS: sentence list and multiple choice picture sheets (included)

PREPARATION: Duplicate picture sheets—one set for each student

ACTIVITY:

Give one set of picture sheets to each student. Begin with number one (this can be useful as an example of the procedure)

- Read the appropriate sentence. Have students mark the box that best illustrates the sentence.

Read sentence number two. Have students turn to page two and mark the box that best illustrates the sentence. Continue through number 19.

- After the initial use of these sheets, they can be used as stimulus for discussion or written expressions i.e., "color the picture you like best; tell about it; write about it."

1. The girl is standing. (a)

2. The chair is by the tree. (d)

3. The boy is sitting at his desk crying. (a)

4. The young girl has stepped in the mud. (b)

5. Carol is playing with a cat and a flower. (b)

6. Diane cautiously began to reach toward the rabbit. (c)

7. Robert is very unhappy because he does not have any lunch. (b)

8. The young woman in the middle has opened the jar of candy. (b)

9. The young boy is having a great time eating an ice cream sundae. (d)

10. John is very angry because his brother is trying to wrestle his ball away. (c)

11. Bill was rolling down the hill, his skate wheel hit a rock, and he started to fall. (c)

12. Jim did not have a book, so he is sharing with the girl who is sitting in the middle. (b)

13. Sharon is a hard worker and often helps her teacher erase the numbers on the board. (b)

14. The three boys who loved music all sat down, and Roger began to play his instrument. (d)

15. Mary has to write quickly with her pencil in order to get the message on the telephone. (a)

16. John sat at the desk doing homework and could not watch the television in the other room. (d)

17. Karen and her brother are having fun playing while their father is behind them cutting the lawn. (d)

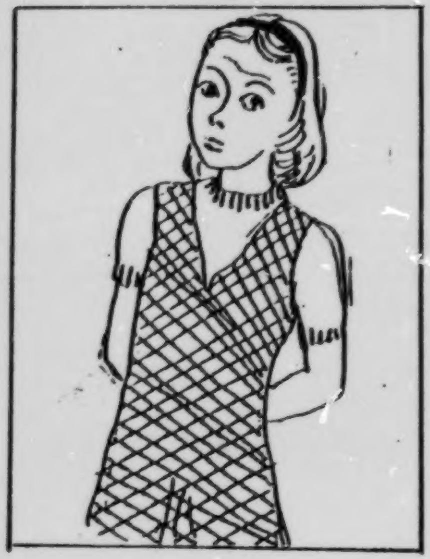
18. Ron was going to jump off the diving board, but when he got to the end he became frightened and turned around to go back. (c)

19. Toni enjoyed dinner so much that she ate all of her food and then held her plate out so that her mother could give her more. (c)

SENTENCE MEMORY MULTIPLE CHOICE

1

a



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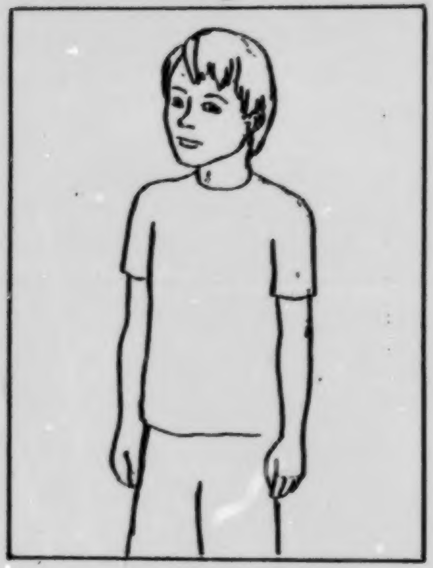

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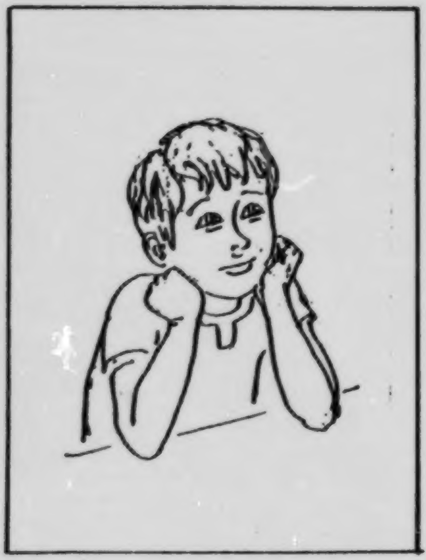

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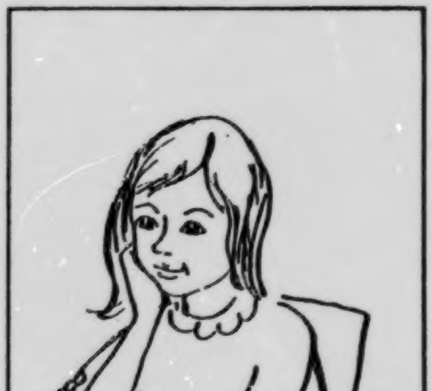

SENTENCE MEMORY MULTIPLE CHOICE

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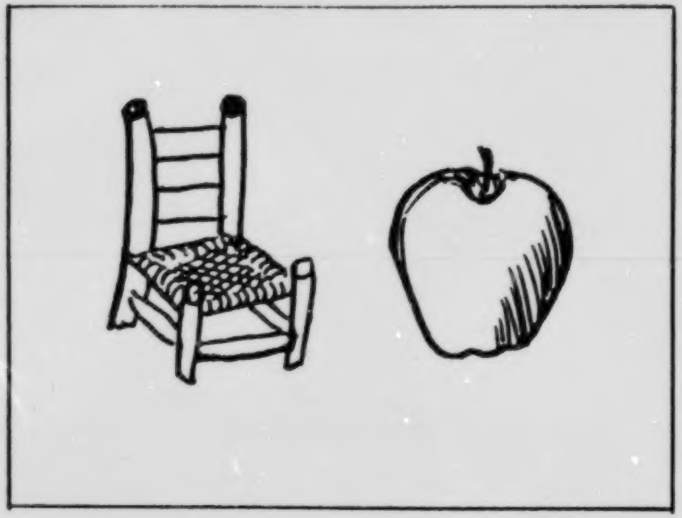

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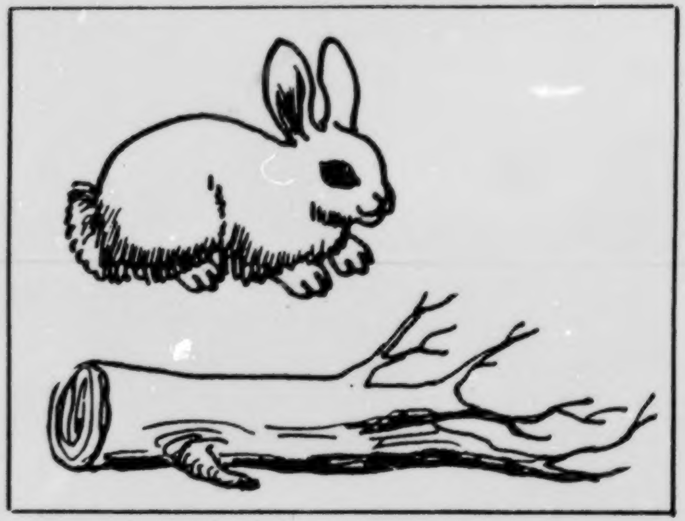

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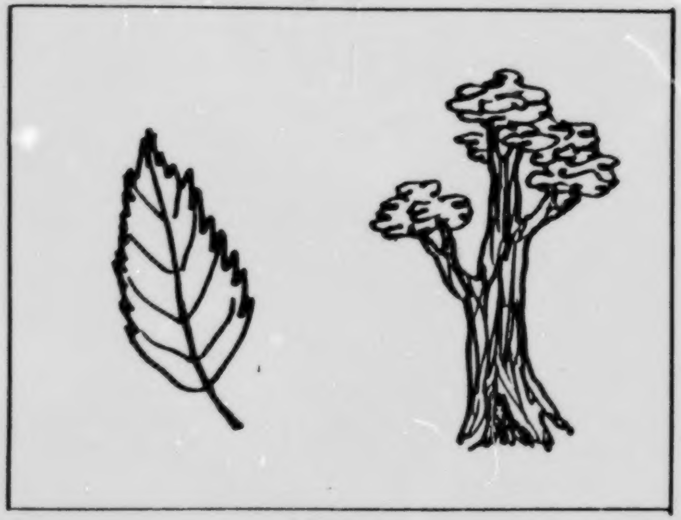

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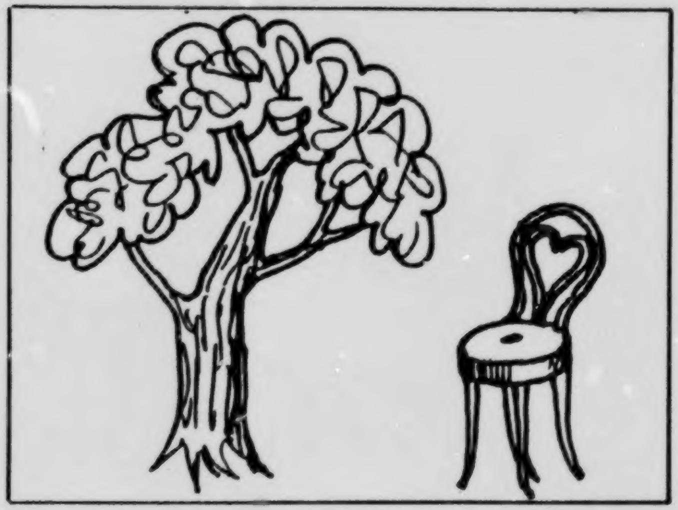


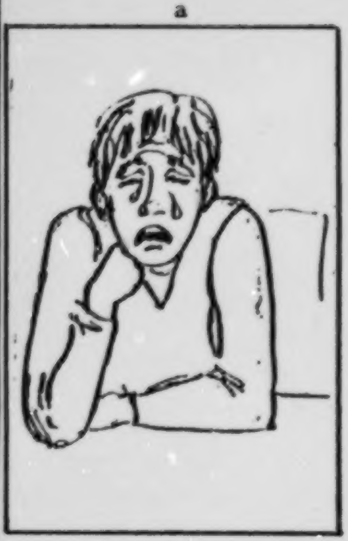
SENTENCE MEMORY MULTIPLE CHOICE

13-LB

116

117

a



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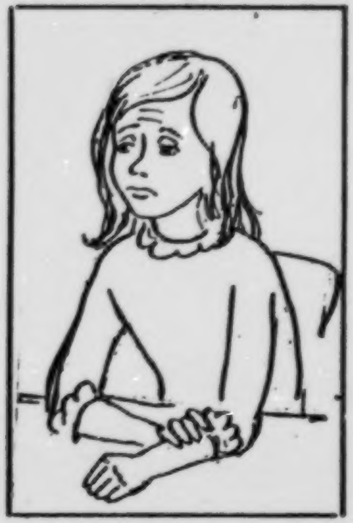

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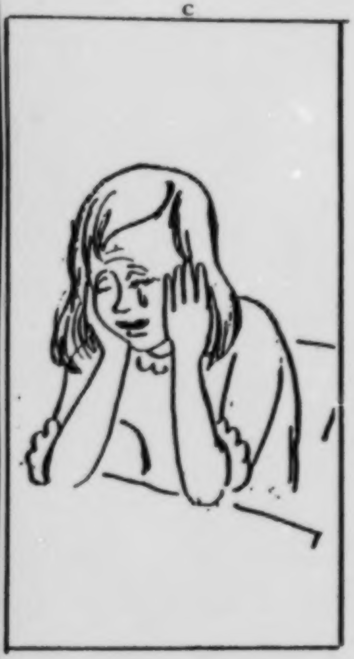

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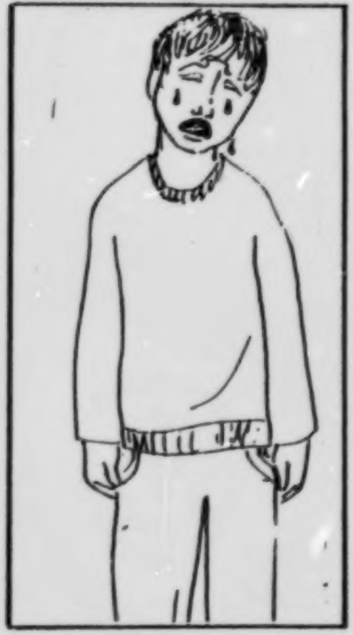
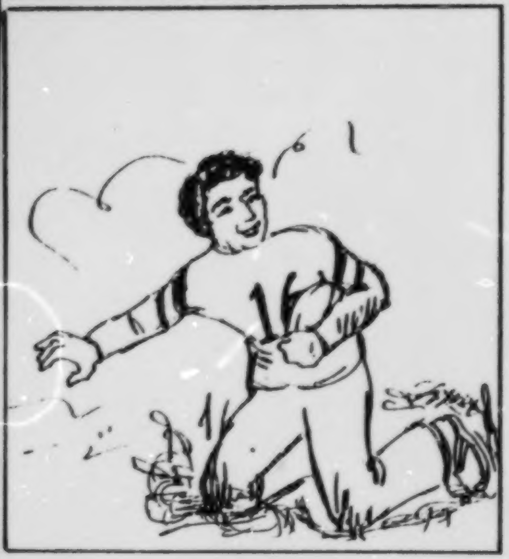
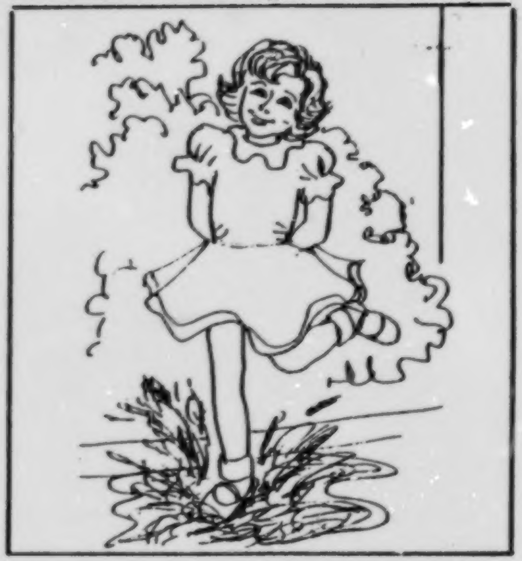


SENTENCE MEMORY MULTIPLE CHOICE





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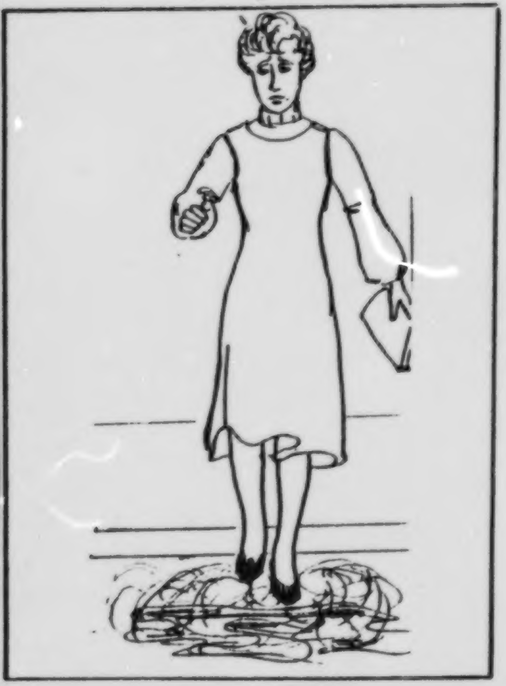

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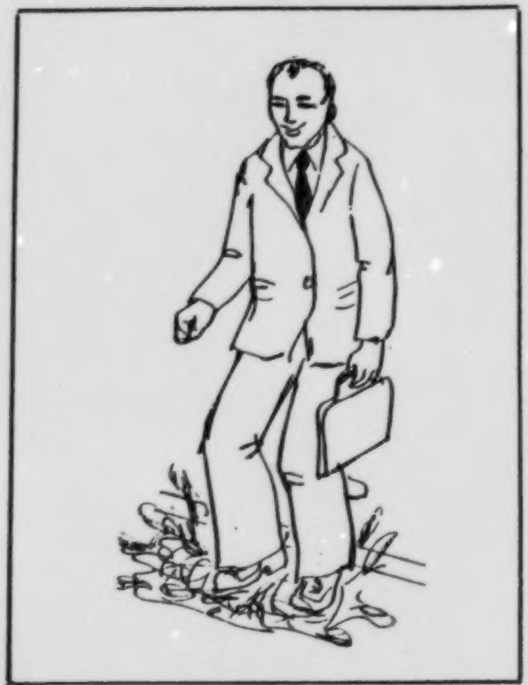

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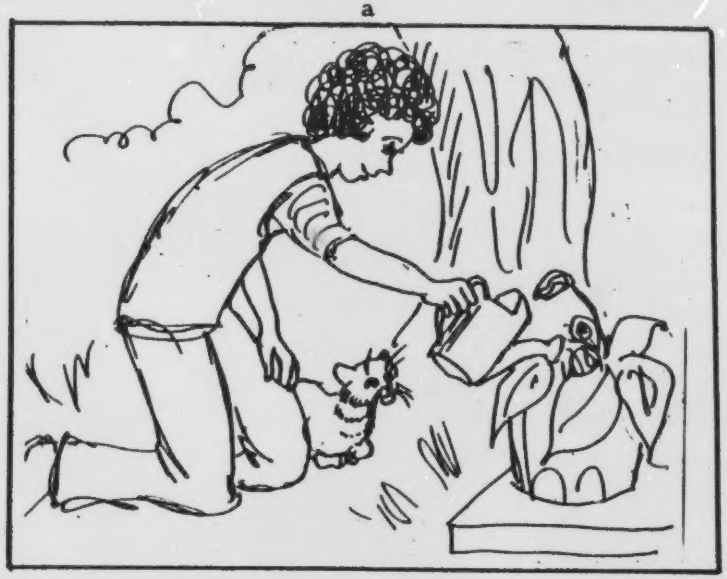

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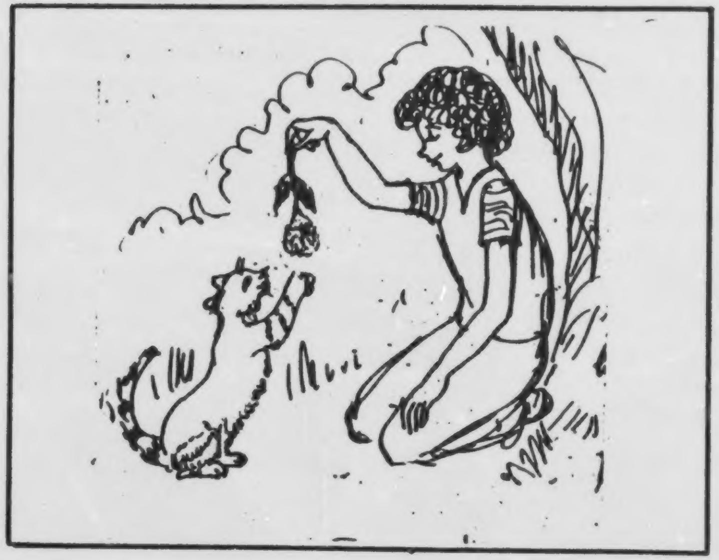

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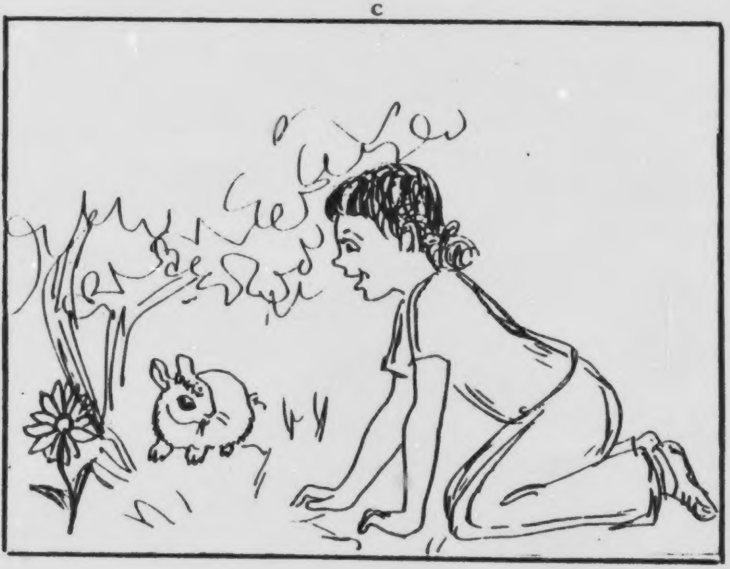

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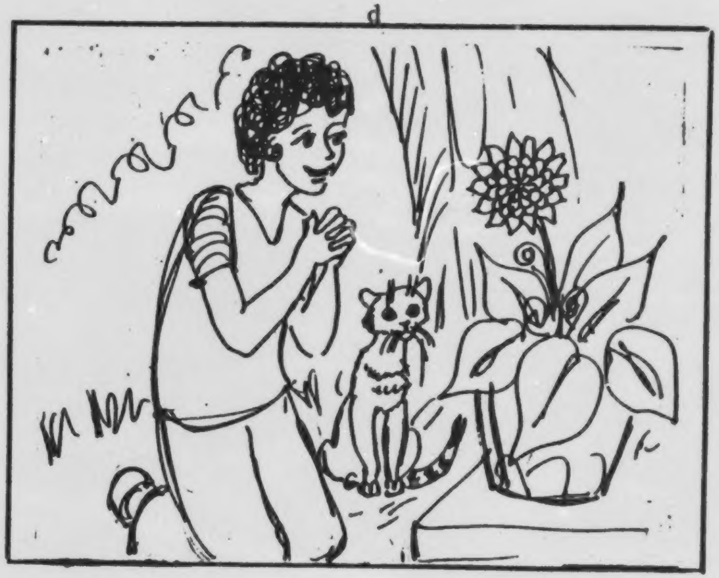

SENTENCE MEMORY MULTIPLE CHOICE

15-LB

6

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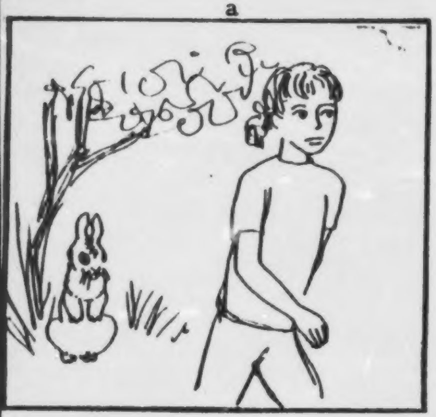

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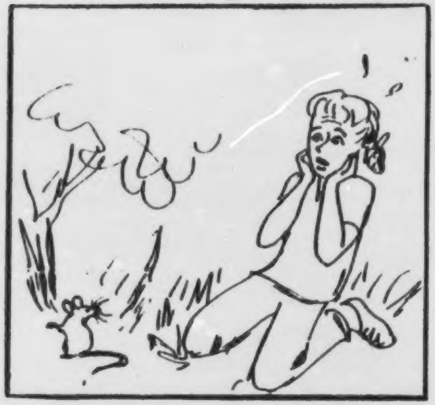

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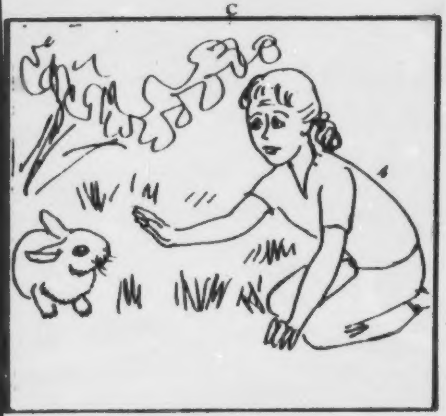

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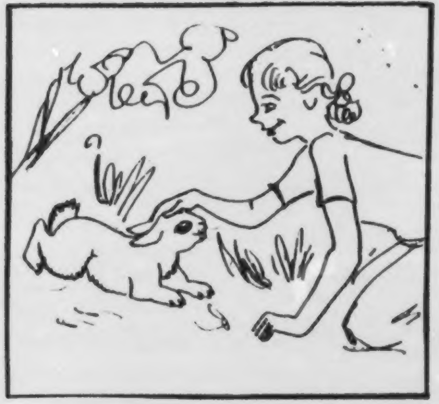

SENTENCE MEMORY MULTIPLE CHOICE

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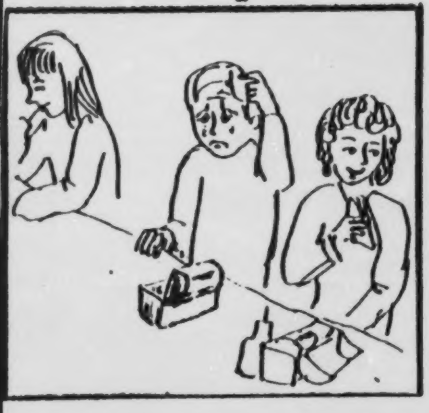

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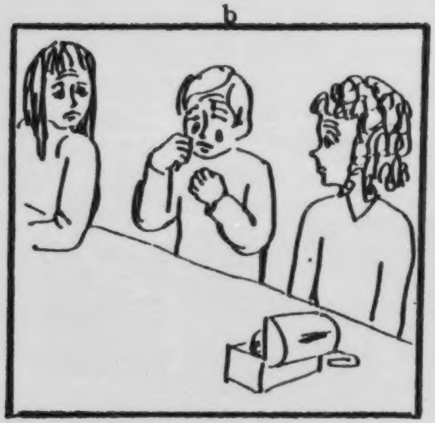

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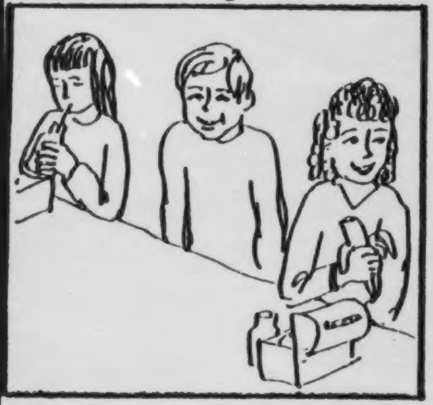

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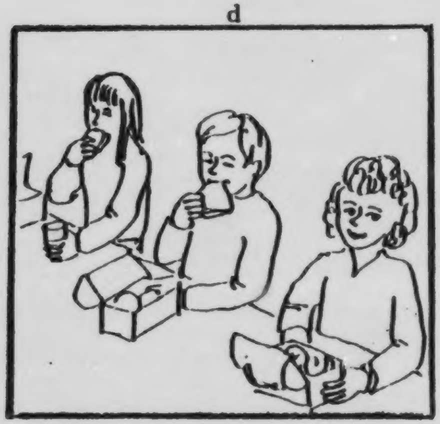

SENTENCE MEMORY MULTIPLE CHOICE

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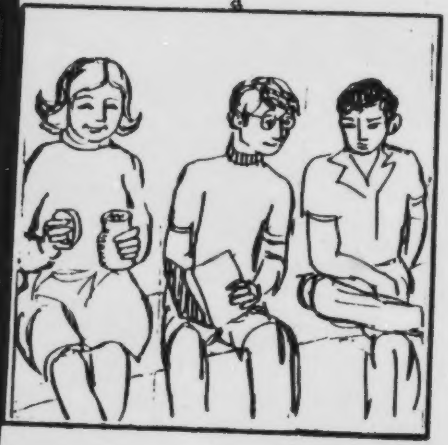

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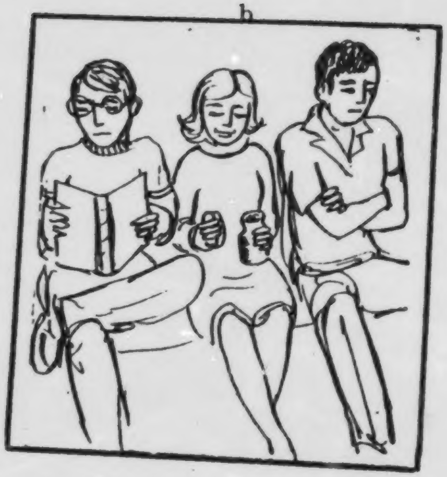

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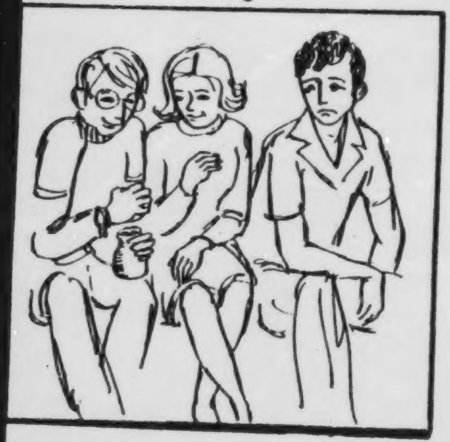

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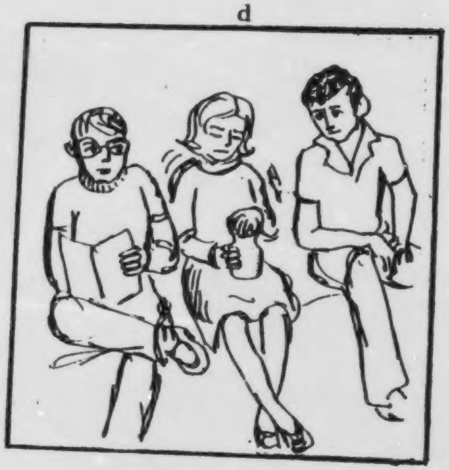

SENTENCE MEMORY MULTIPLE CHOICE

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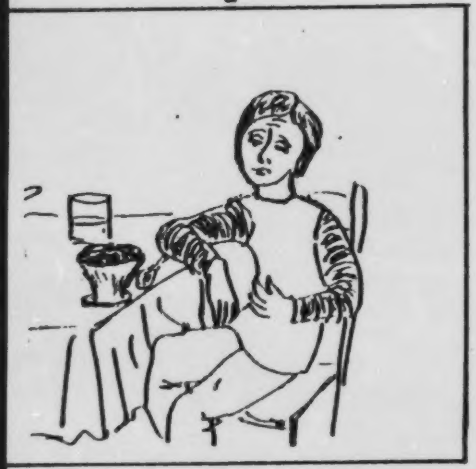

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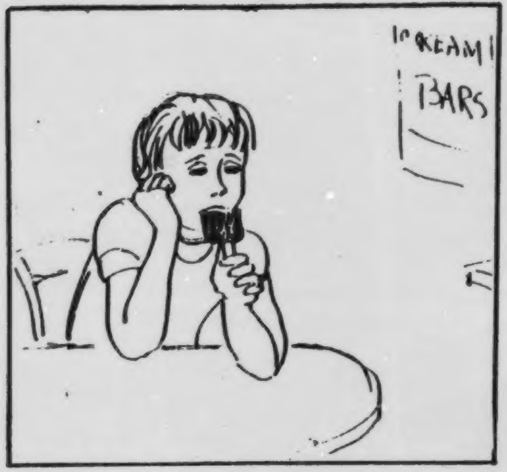
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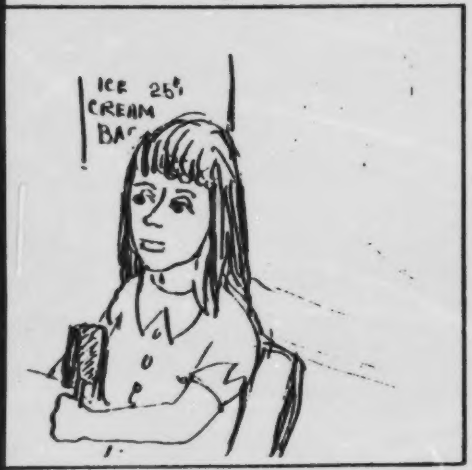
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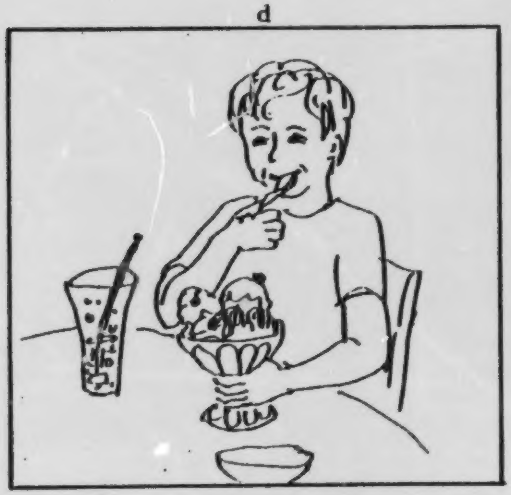

SENTENCE MEMORY MULTIPLE CHOICE

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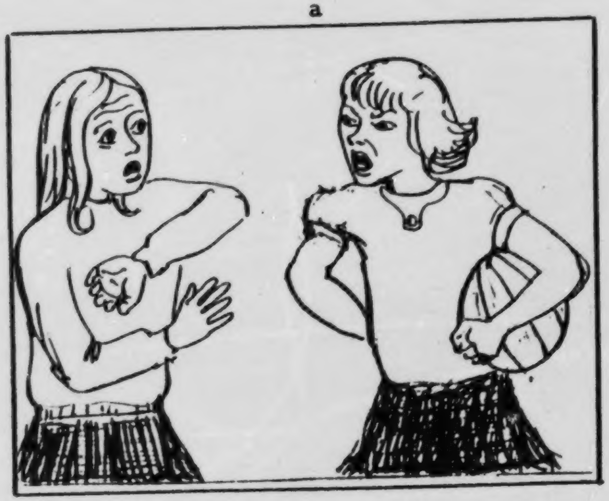

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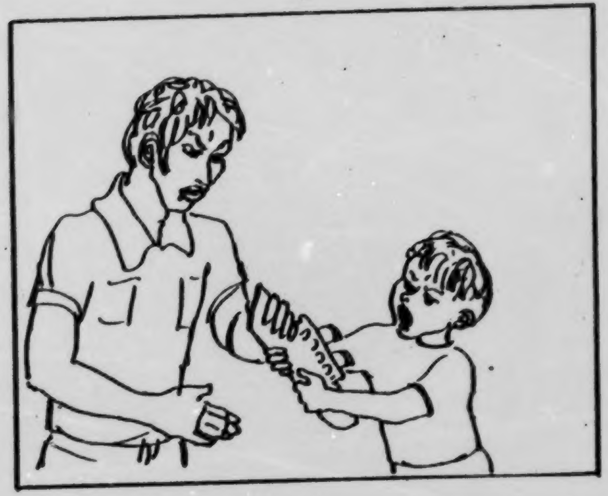

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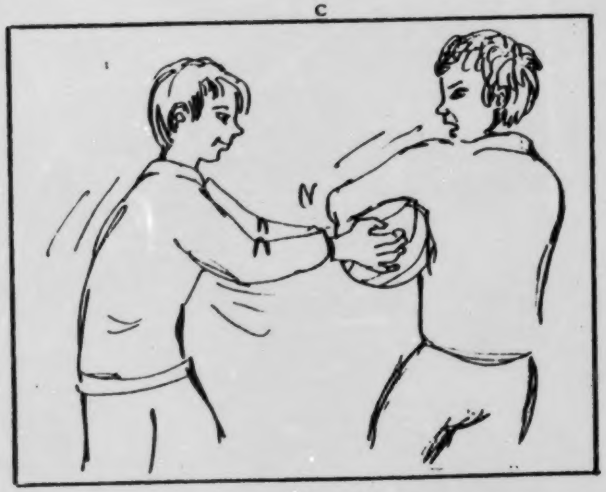

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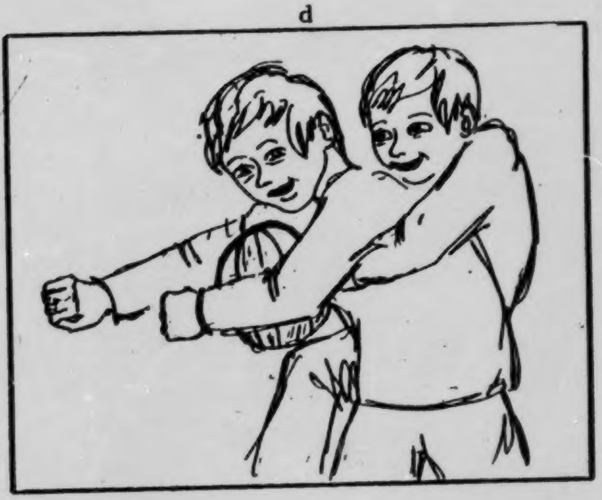

SENTENCE MEMORY MULTIPLE CHOICE

21-LB

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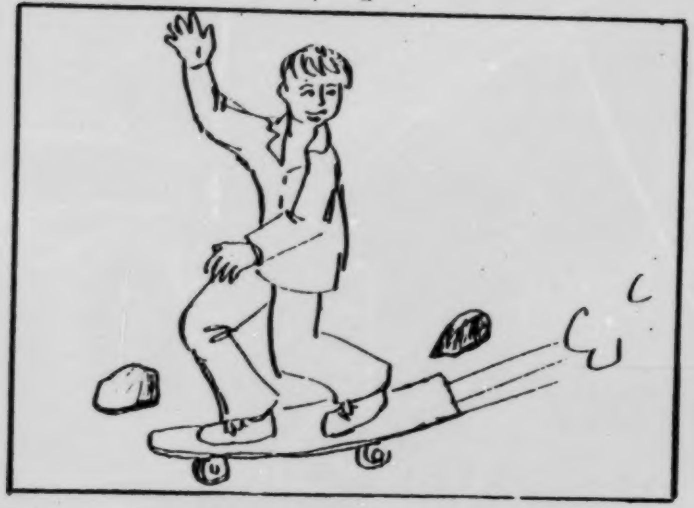

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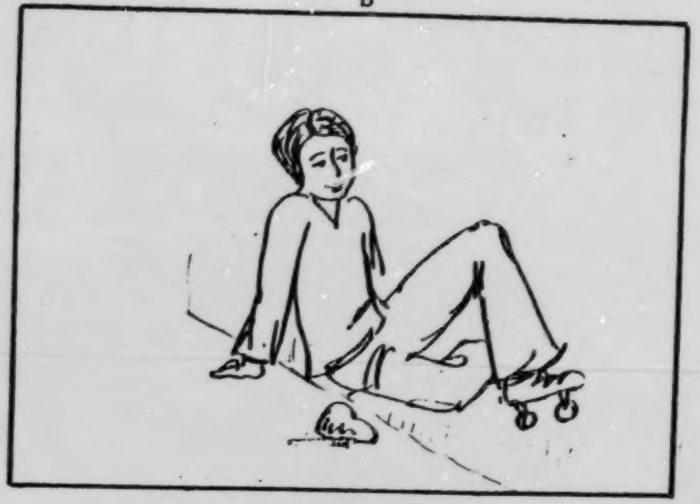

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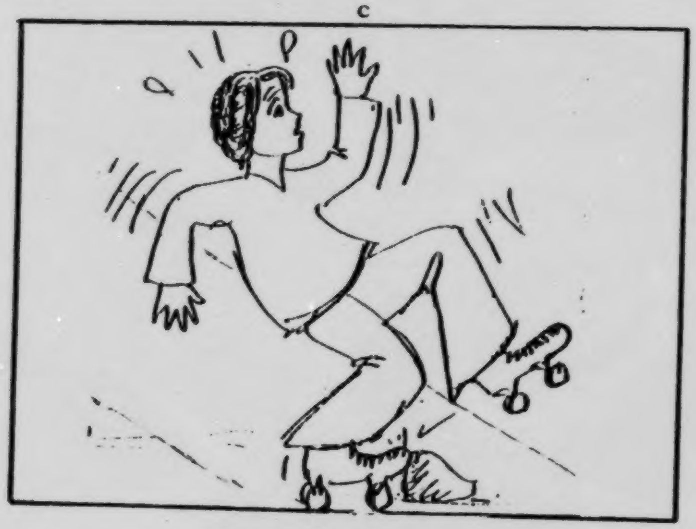

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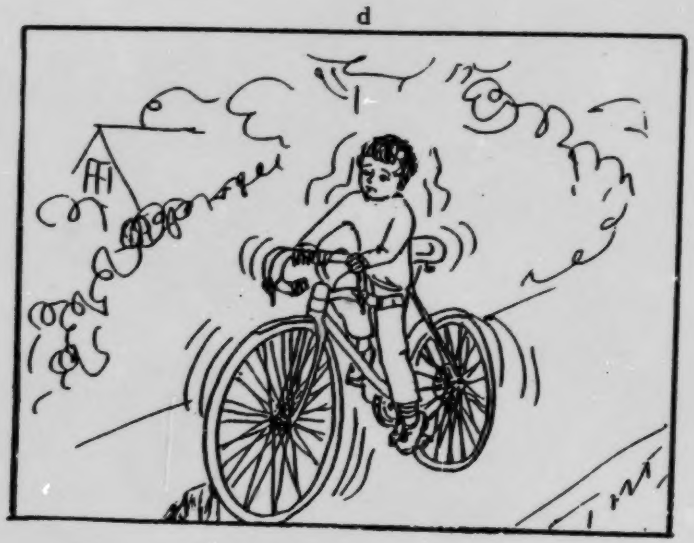

SENTENCE MEMORY MULTIPLE CHOICE

22-LB

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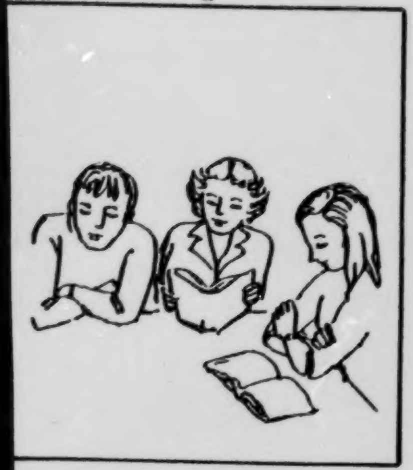

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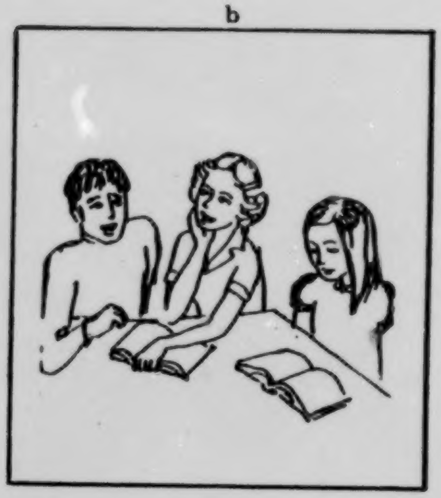

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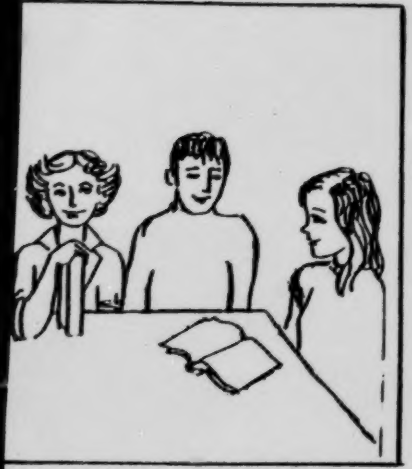

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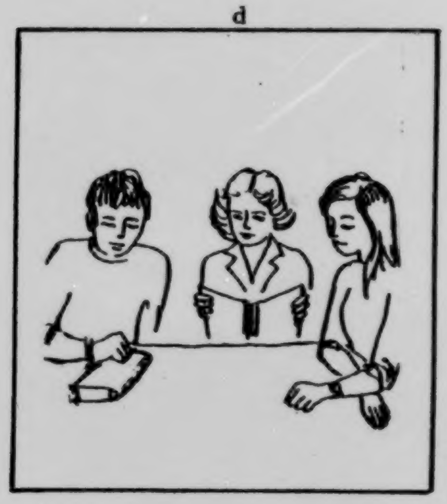

SENTENCE MEMORY MULTIPLE CHOICE

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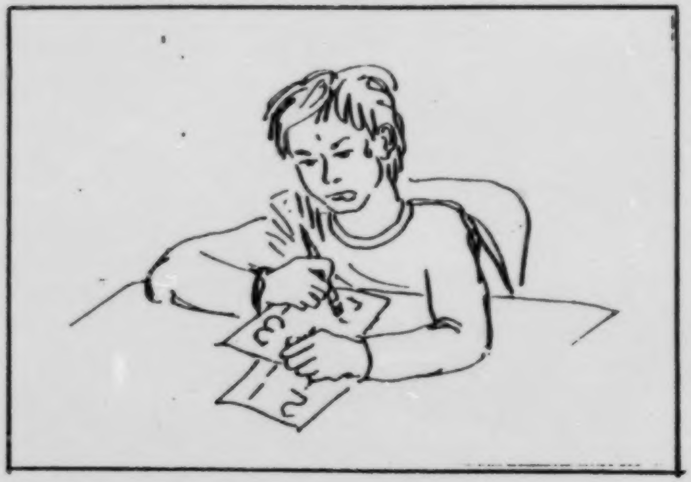

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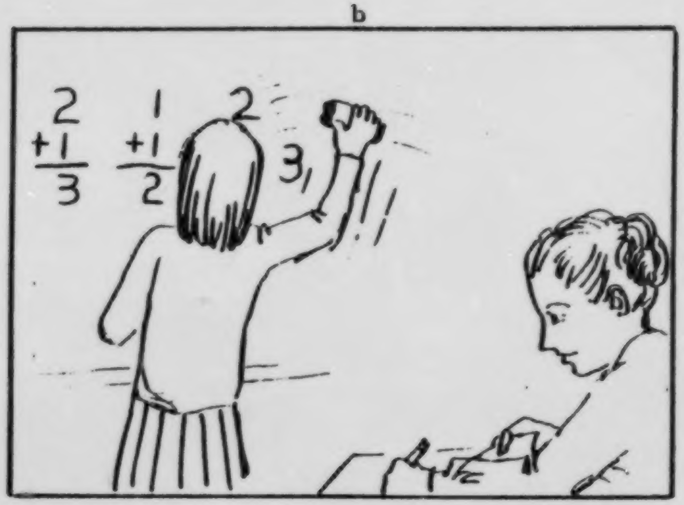

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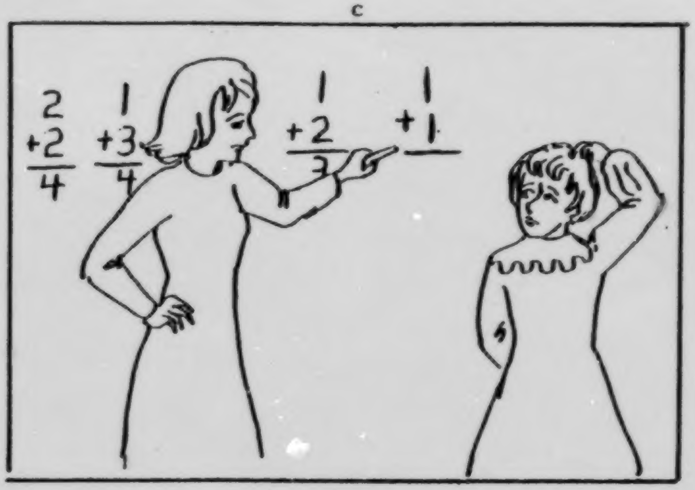
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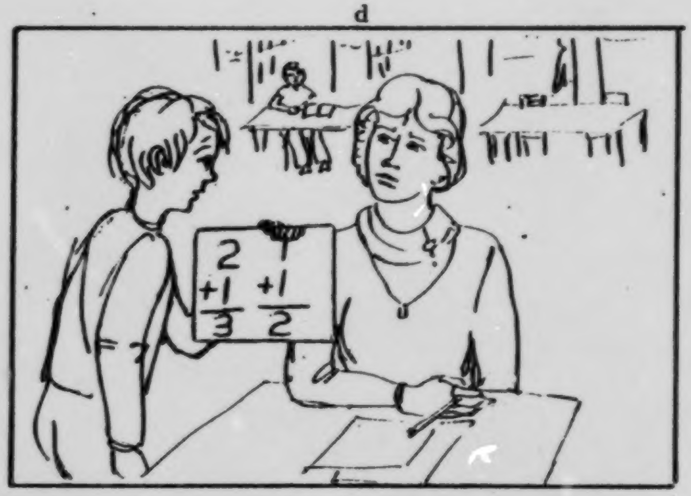

SENTENCE MEMORY MULTIPLE CHOICE

24-LB

131

132

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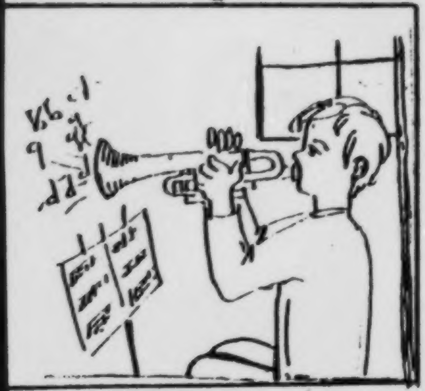

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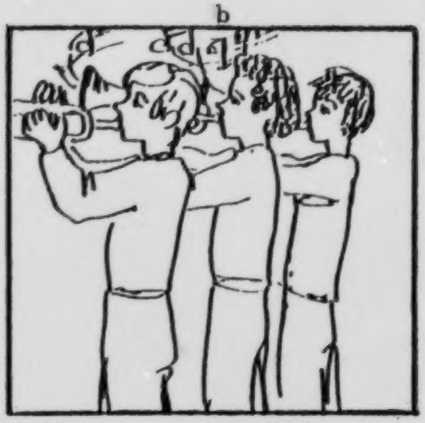

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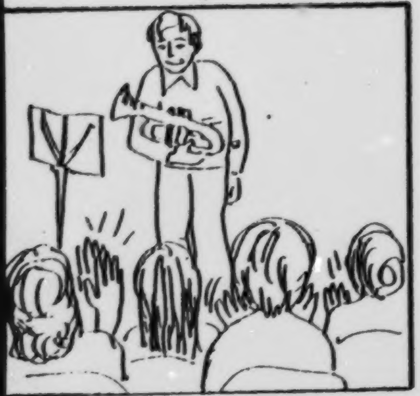

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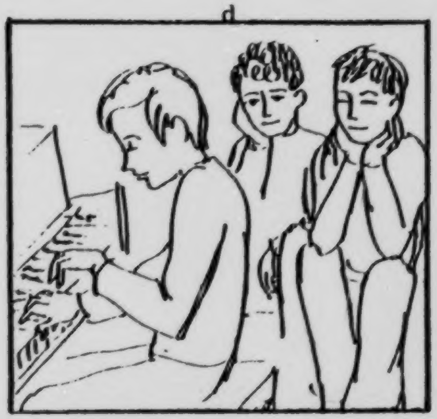
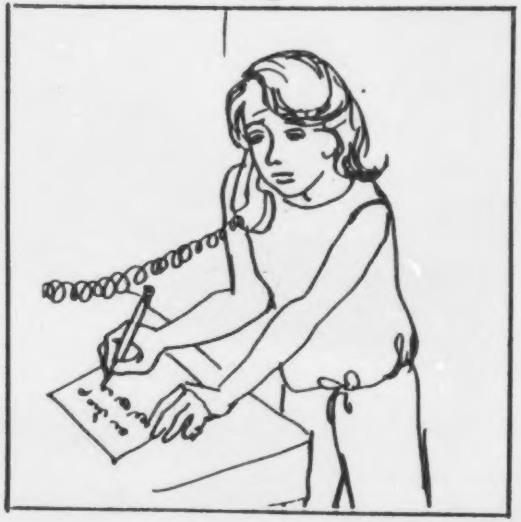


SENTENCE MEMORY MULTIPLE CHOICE

a



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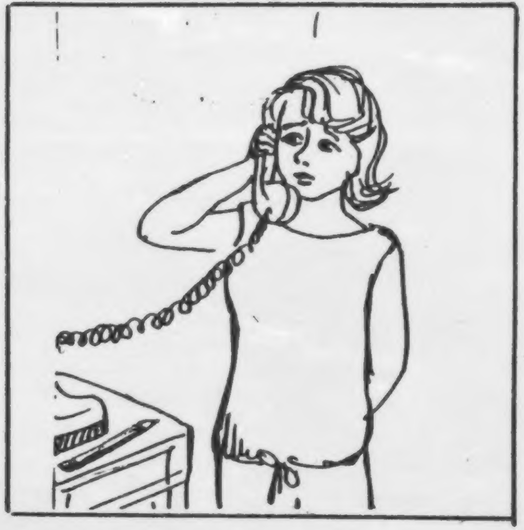

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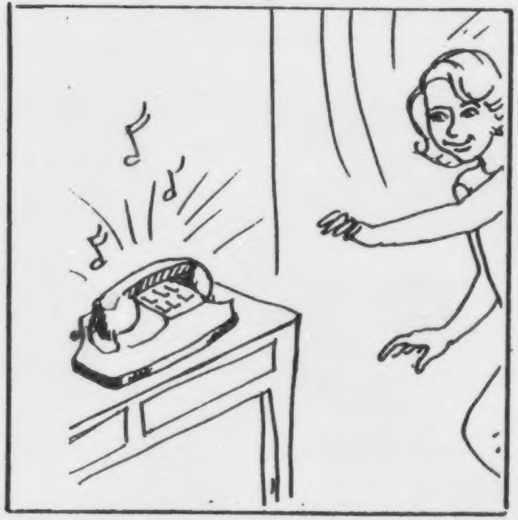

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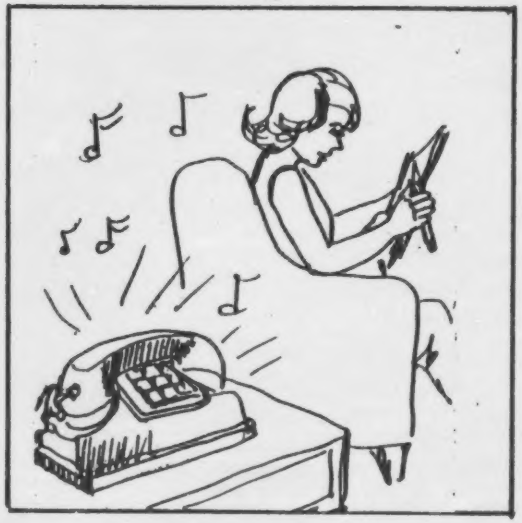
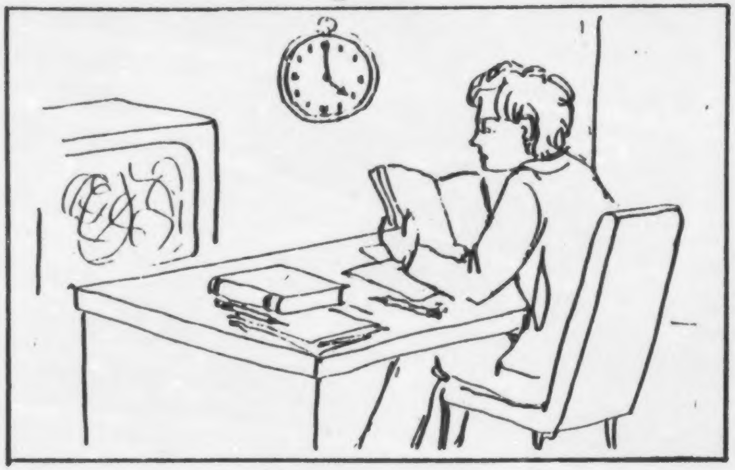


SENTENCE MEMORY MULTIPLE CHOICE

26-LB

a



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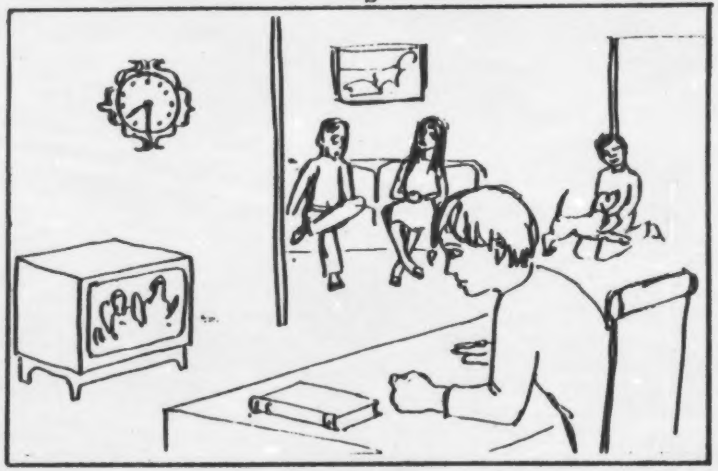

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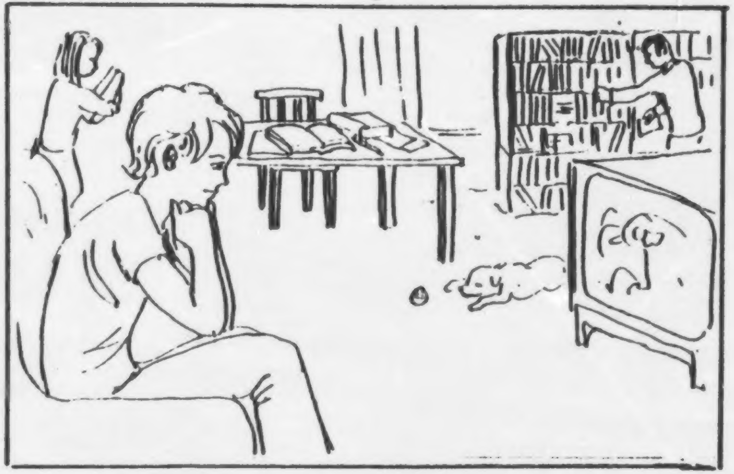

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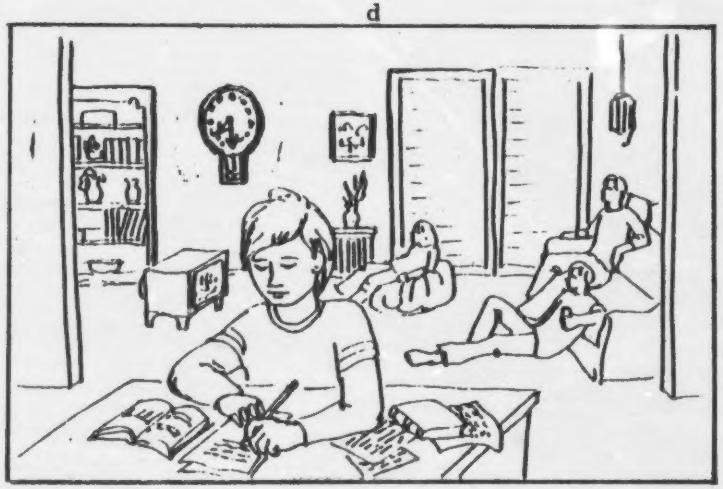
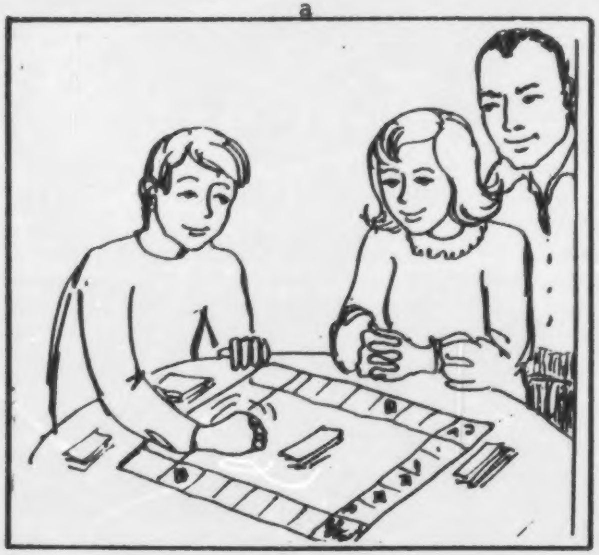


SENTENCE MEMORY MULTIPLE CHOICE

a



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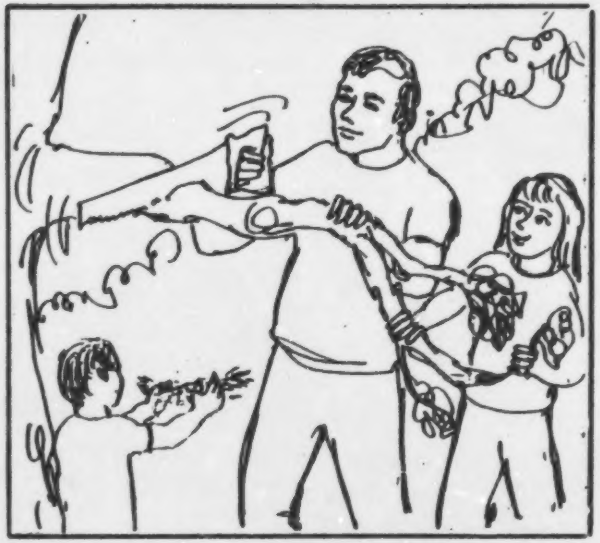

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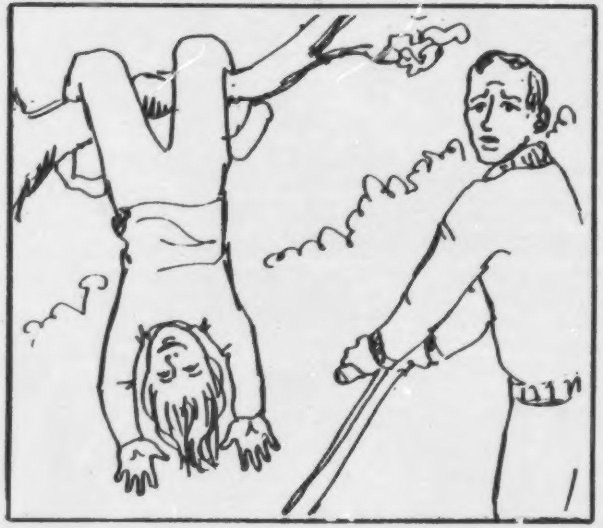

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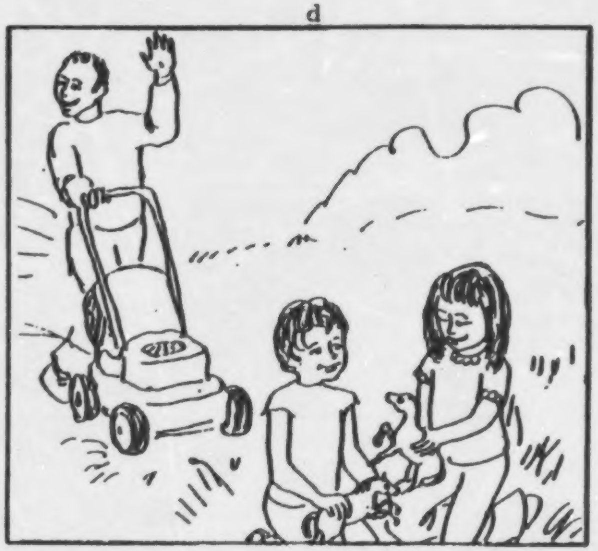


SENTENCE MEMORY MULTIPLE CHOICE

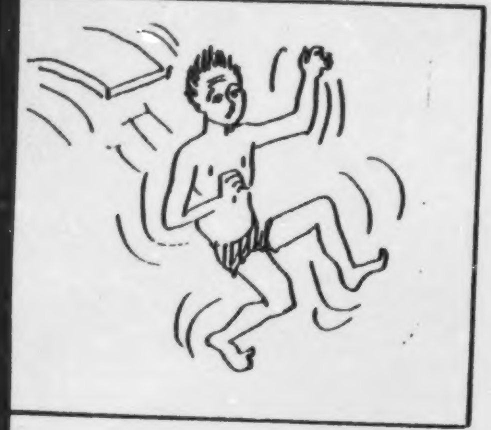
28-LB

138

139

18

a



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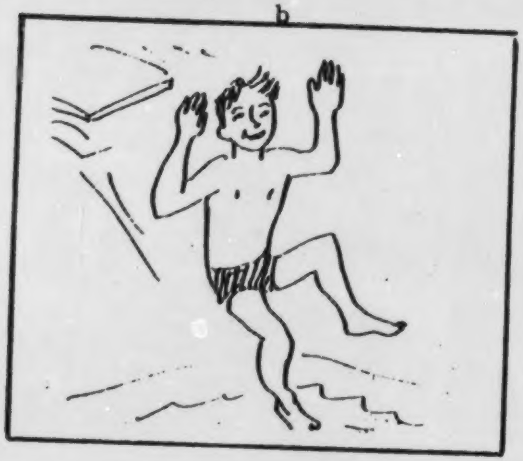

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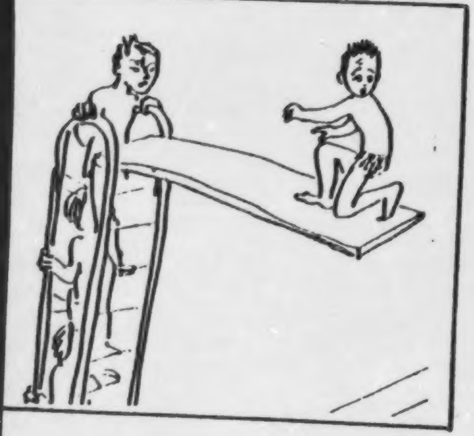

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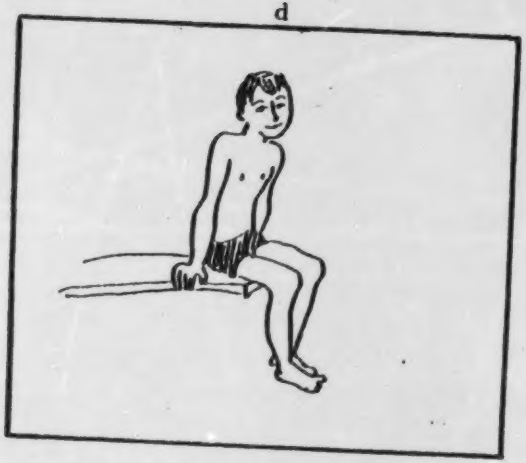
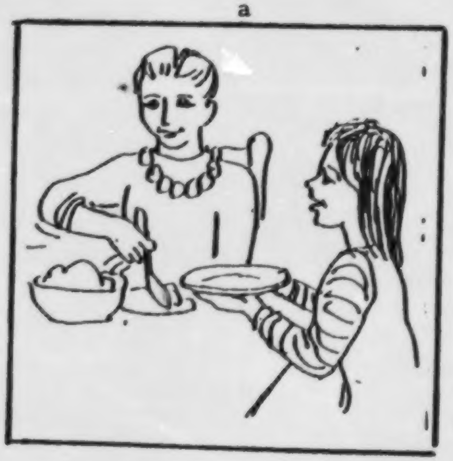


SENTENCE MEMORY MULTIPLE CHOICE

a



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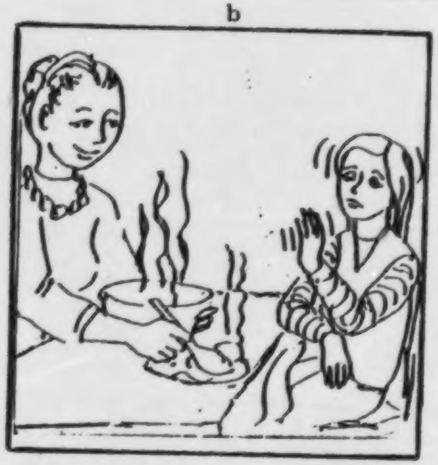

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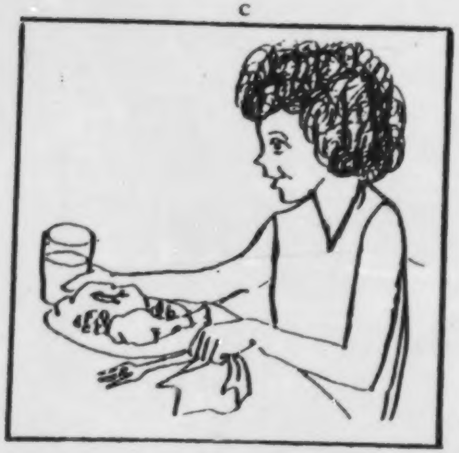

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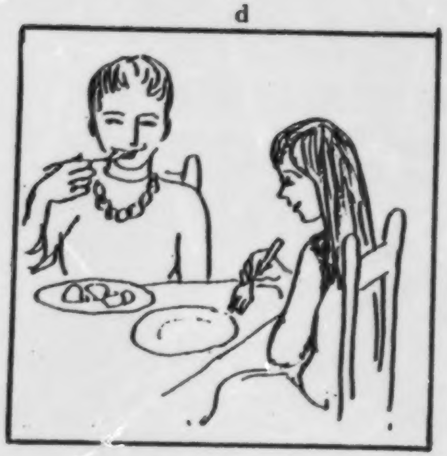


SENTENCE MEMORY MULTIPLE CHOICE

30_LB

CLASSIFICATION CARDS

This set of cards is printed on twelve sheets. Each sheet contains eight pictures, for a total of 96 pictures.

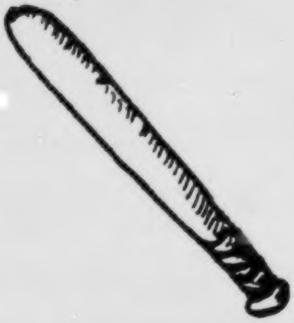
To make the cards:

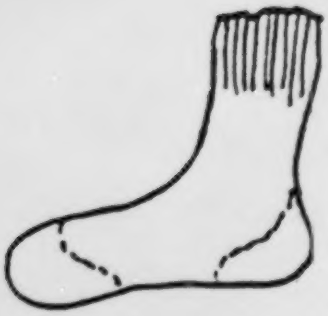
reproduce the sheets
cut each set of sheets into 8 equal sections.

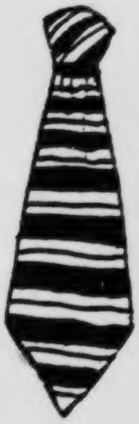
The cards may be used for the following lessons:

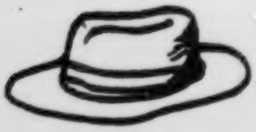
Classification Fish
Classification: Cut and Paste
Classification: 20 Questions

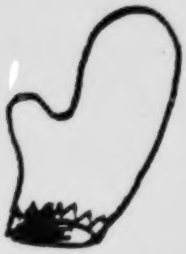
Classification Cards

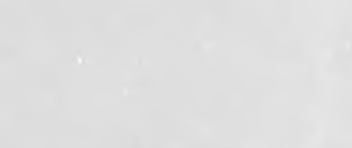


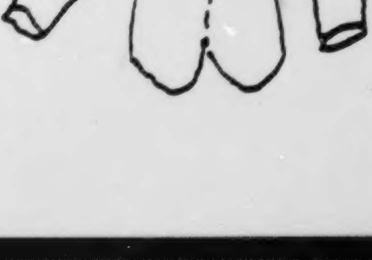


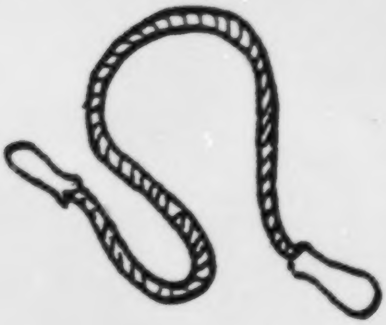


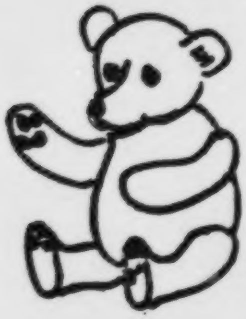


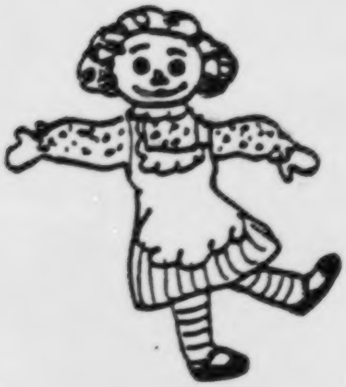


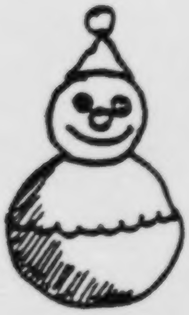


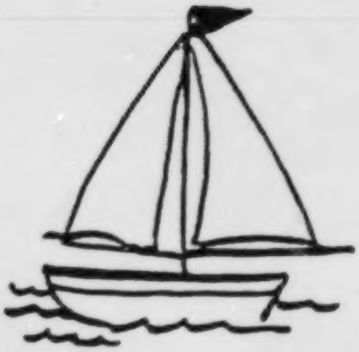


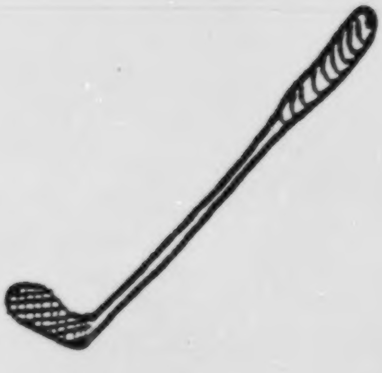


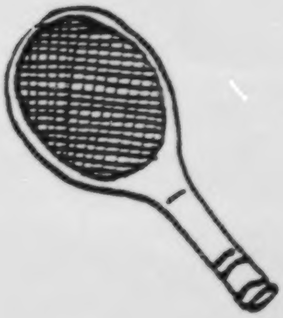


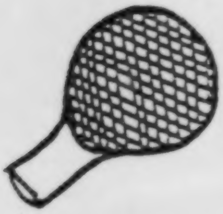




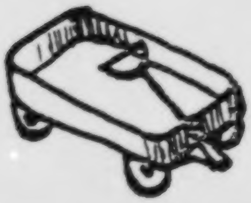


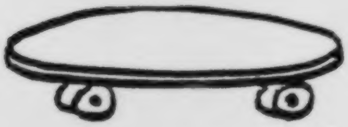


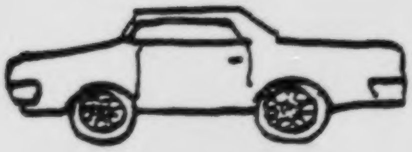


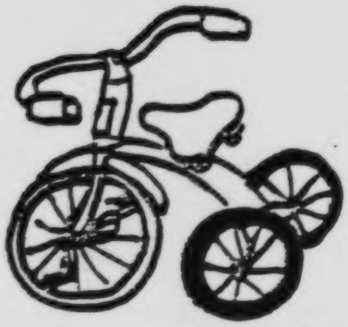


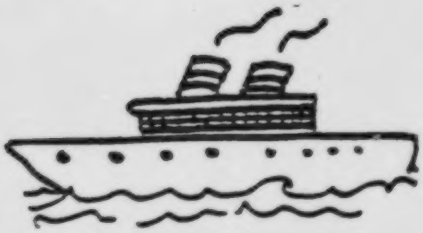
Classification Cards

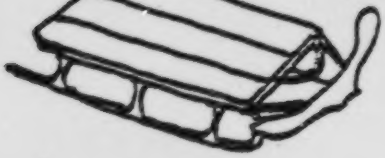


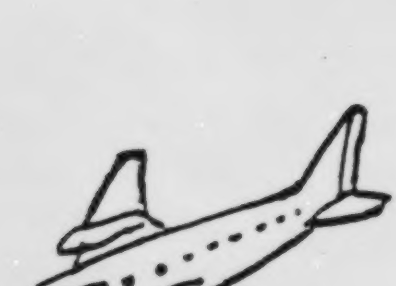


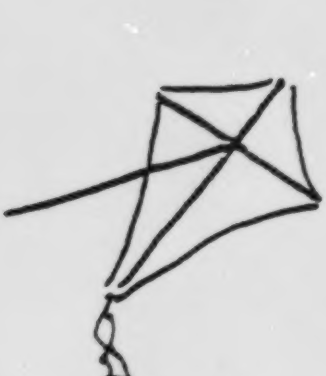




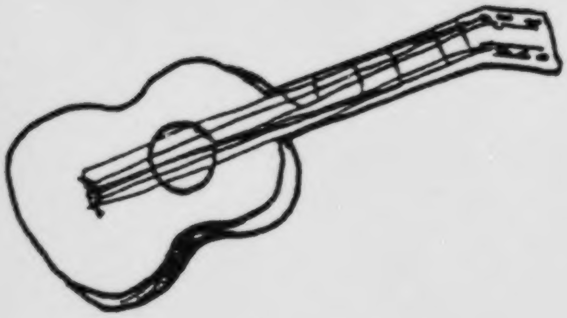


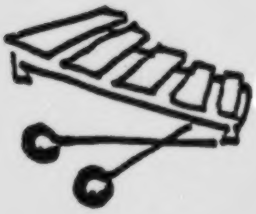


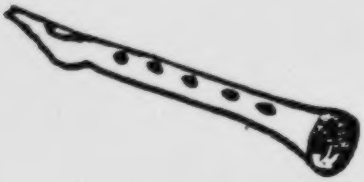


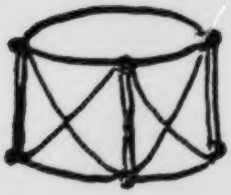


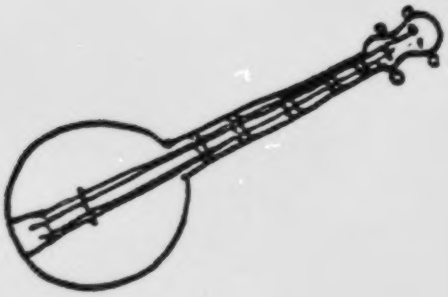
34-LB

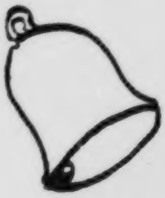


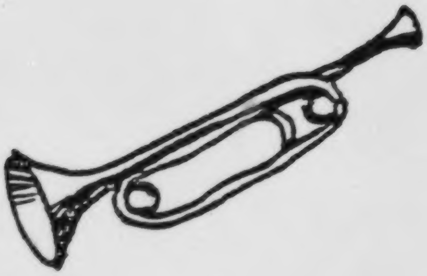


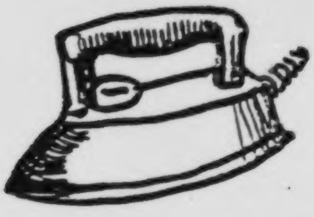


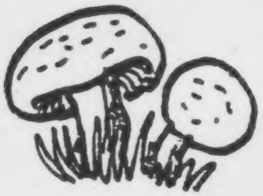


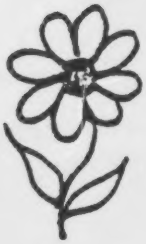


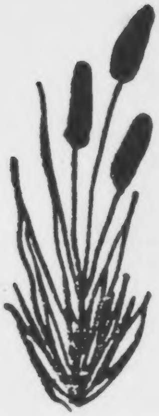


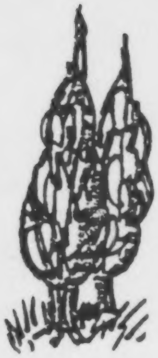


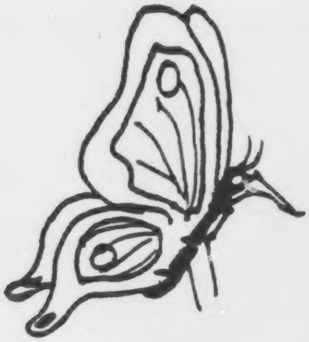


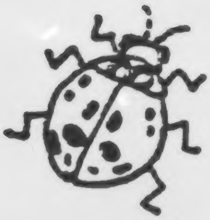


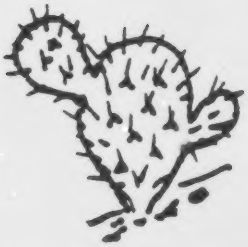


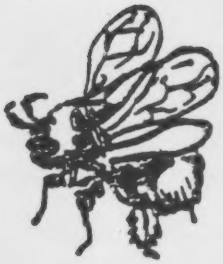


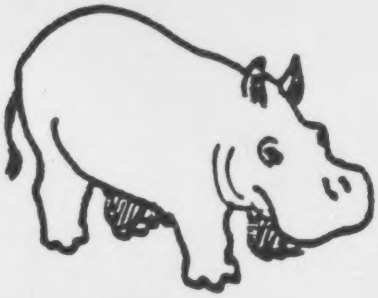


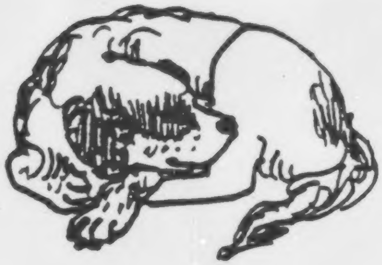


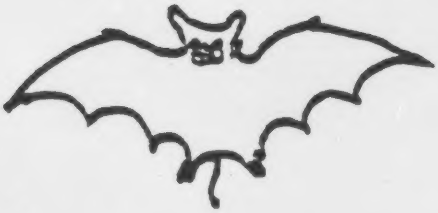


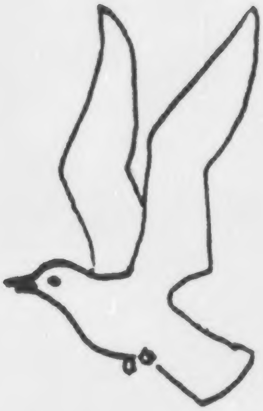


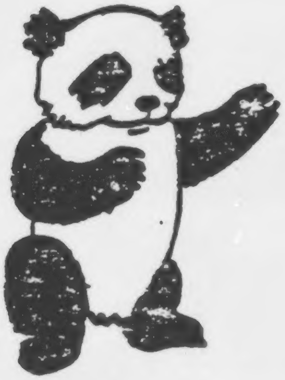


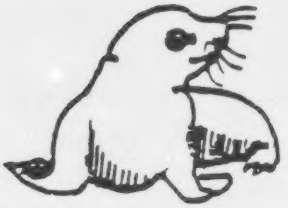


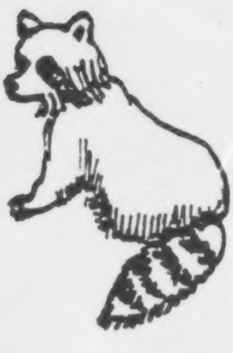


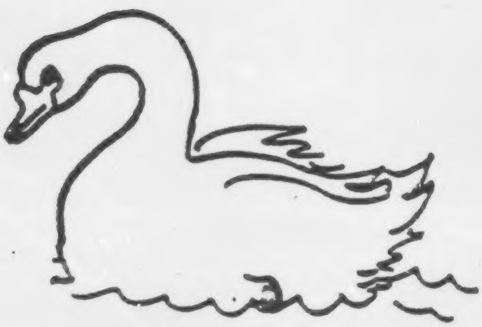


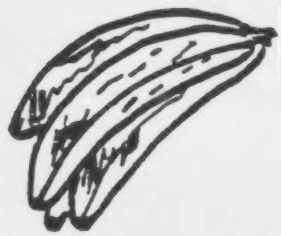


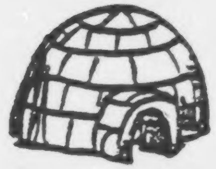


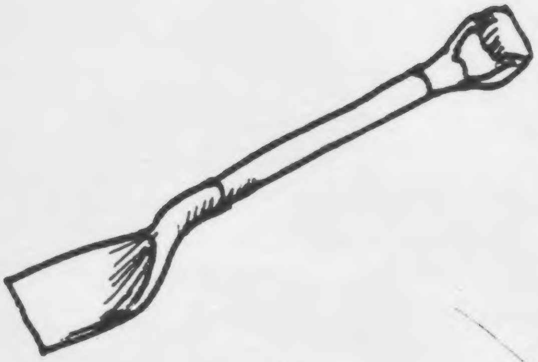


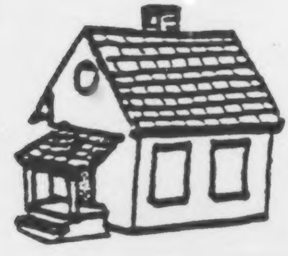


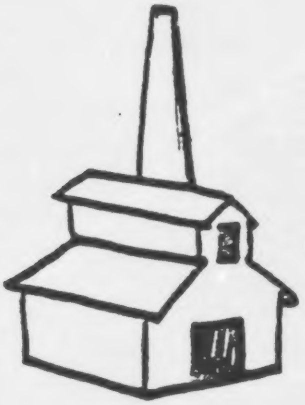


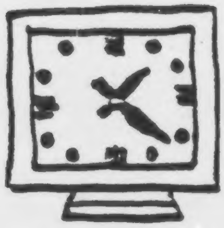


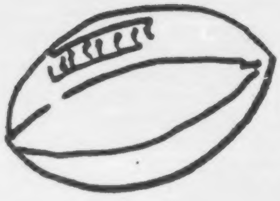


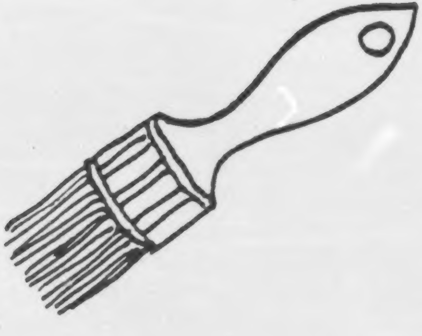


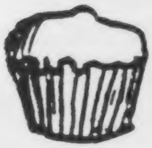


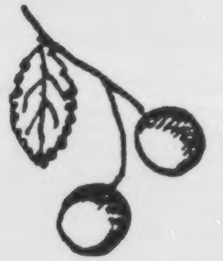


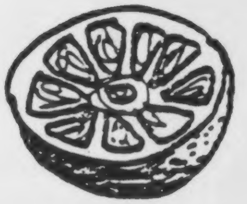


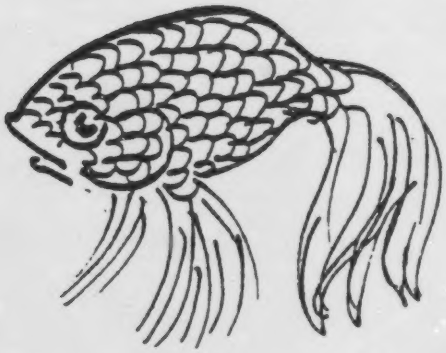


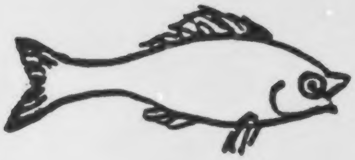


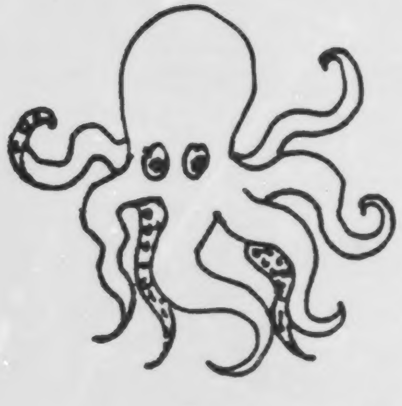


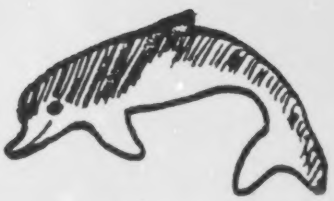


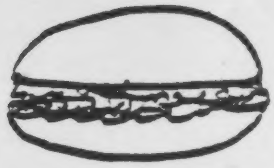


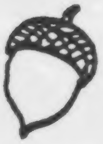


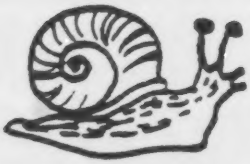


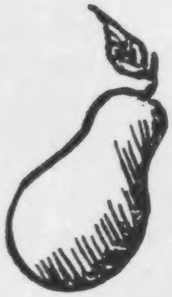


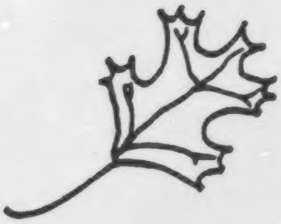


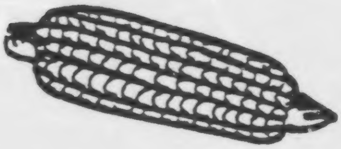


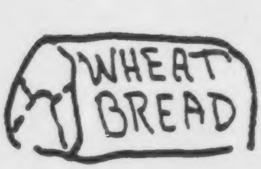


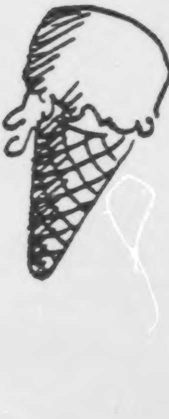


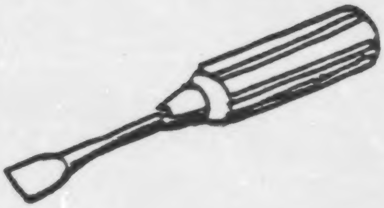


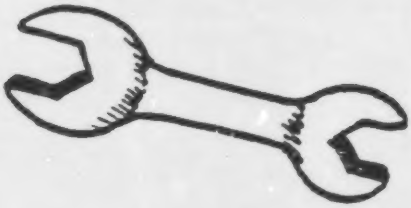


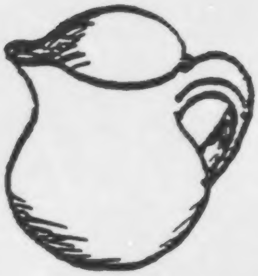


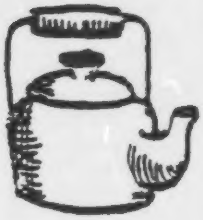

WHEAT
BREAD

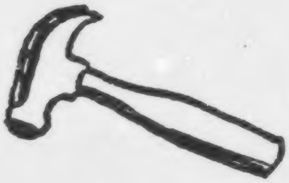


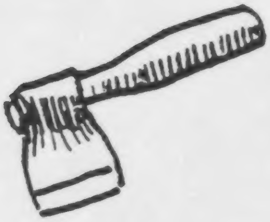


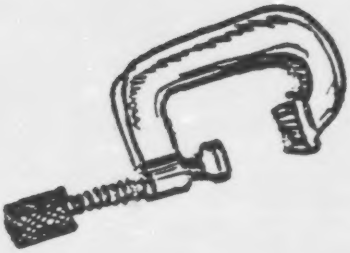


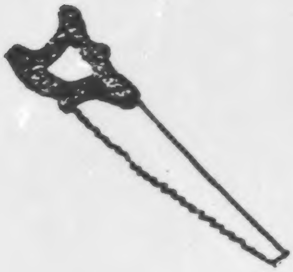


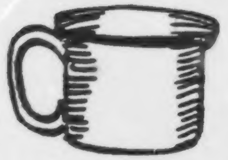


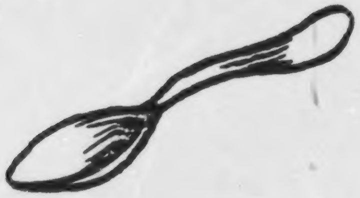


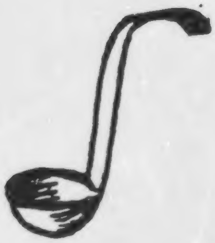


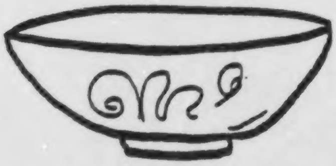


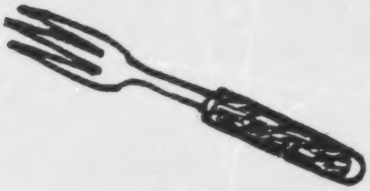


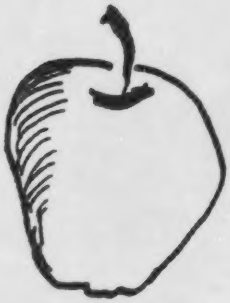


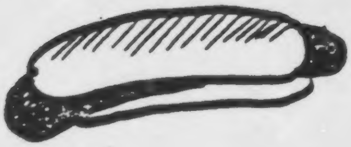


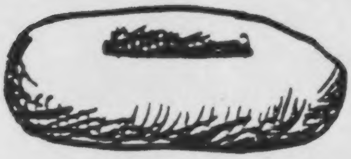


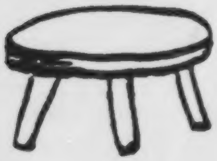


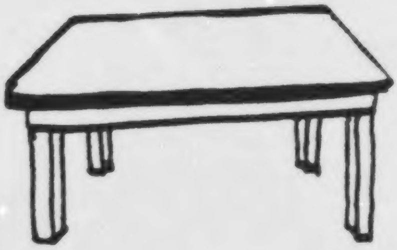


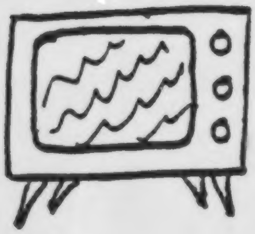


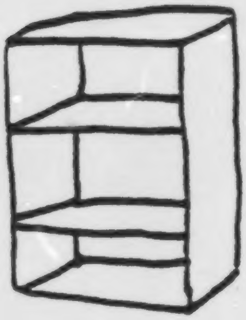


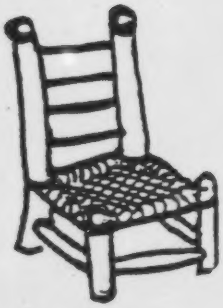


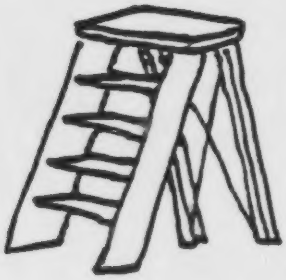


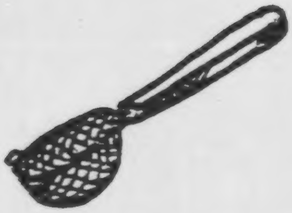


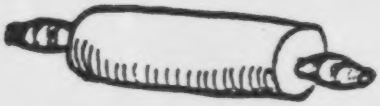












CLASSIFICATION FISH

OBJECTIVES: Classify pictures by meaning

MATERIALS: set of classification cards (included)

ACTIVITY:

To play this game one student acts as dealer. Dealer shuffles the cards and deals six cards facedown to each player. The rest of the cards go facedown in the center of the table.

◐ Each player decides if four cards will go together in a special way to make a class of items.

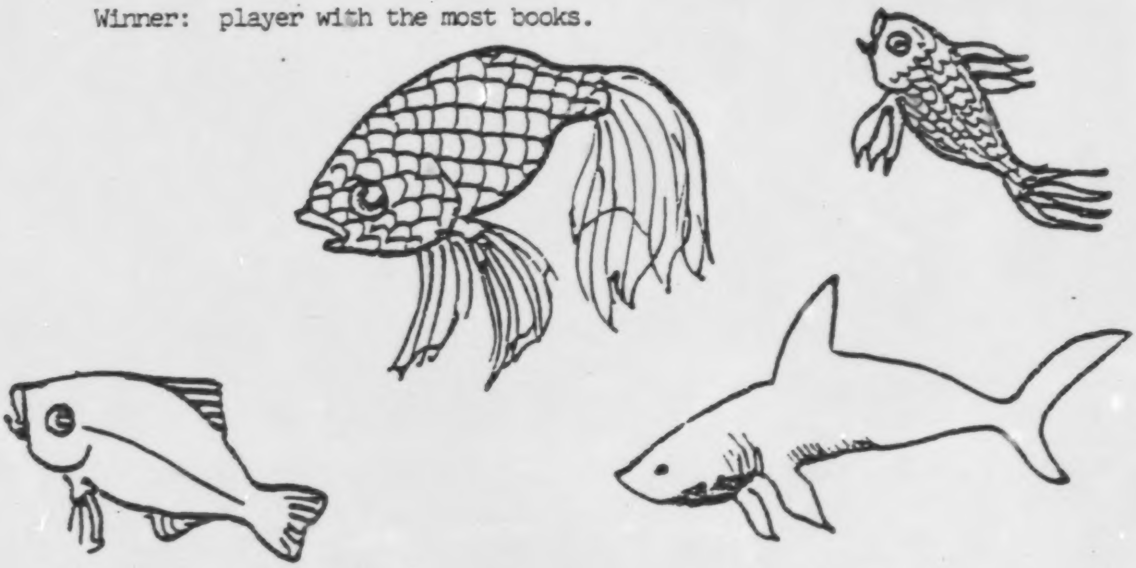
◐ The player to the right of the dealer goes first, and can open by putting down a book of cards consisting of a class of four, or by asking the player on the right for a card of a certain class (such as "toys," "animals," etc.)

If that player does not have the requested card, the first player may draw the top card from the deck in the center of the table. If that card does not complete a book, the card is added to the player's hand and the next player takes a turn.

Play continues until as many books as possible have been completed.

◐ As a player puts down a book of four cards, the player must name the class or else that book will not count. Encourage students to think of different ways of classifying items. For example, a class of things that have handles could include the shovel, the spoon, the iron, and the teapot. A class of things that grow on trees might include a leaf, an acorn, a pear, and an apple.

Winner: player with the most books.



44-LB

CLASSIFICATION: CUT AND PASTE

OBJECTIVE: Classify pictures by meaning

MATERIALS: Classification Cards (included)
scissors
glue
8½" x 11" paper

PREPARATION:

Sheets of Classification Cards should be cut apart and at least eight pictures distributed to each student.

ACTIVITY:

◑ Student places cards faceup.

◐ Student places at least five cards that could be grouped together on the paper.

◐ Check student's work by having student state why certain pictures were placed on the page. This may be written on the back of the paper.

◑ Students glue pictures on page.

● Sheets may be collected and put into a classification booklet. Students can try to guess the attribute of the pictures on each page.

CLASSIFICATION: 20 QUESTIONS

OBJECTIVE: Develop ability to classify pictures by meaning

MATERIALS: set of Classification Cards (included)
container for cards

PREPARATION:

Twelve sheets of Classification Cards need to be cut apart and placed in a container.

ACTIVITY:

◑ Student is chosen to pick a card and show it to no one.

◐ Other students try to guess what is on the card by asking questions that can be answered only with a "yes" or "no". Twenty questions are allowed.

Example: Is it an animal?
Is it made of wood?
Does it make noise?

● Student who guesses the picture will be the next to pick a card.

CLASSIFICATION MULTIPLE CHOICE

OBJECTIVE: Develop ability to classify by meaning

MATERIALS: Classification: Multiple Choice sheets (included)
pencil
crayons

PREPARATION:

The worksheets may either be...

laminated and used with a grease pencil
placed under a plastic cover and used with a grease pencil
reproduced and distributed to students for one-time use with a pencil.

ACTIVITY:

● Students study the three pictures at the top of each page. (The sheets may be folded back along dotted line to expose only the top three pictures. These three may be colored.)

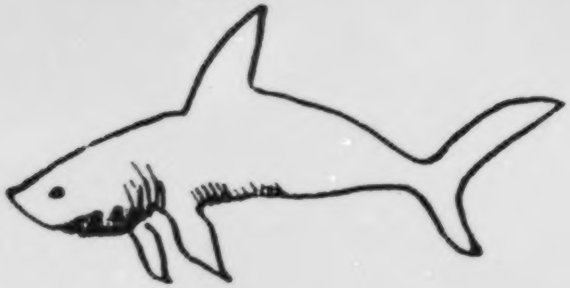
◐ Students decide which picture below the dotted line belongs with the three at the top.

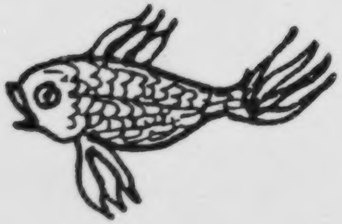
◑ Students may either: circle, mark an X, or color the picture that belongs with the top three.

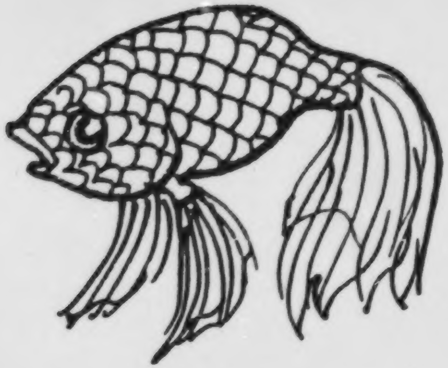
◐ Students explain why they chose the answer they did.

Answers:

Ex.	f	14.	e	28.	a
1.	f	15.	b	29.	f
2.	c	16.	a	30.	a
3.	b	17.	d	31.	e
4.	c	18.	e	32.	d
5.	b	19.	c	33.	a
6.	a	20.	a	34.	f
7.	f	21.	d	35.	e
8.	c	22.	e	36.	c
9.	f	23.	e	37.	b
10.	f	24.	c	38.	e
11.	d	25.	b	39.	b
12.	a	26.	d		
13.	d	27.	f		







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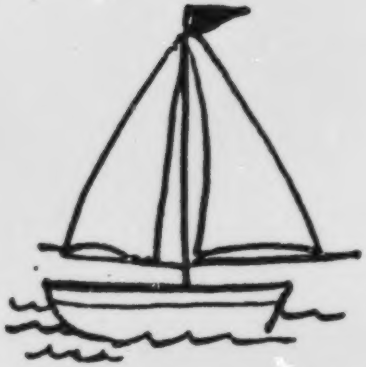

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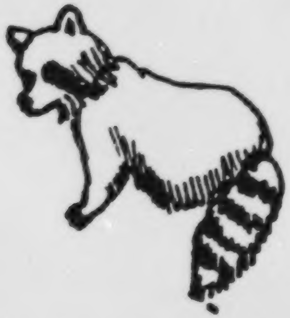

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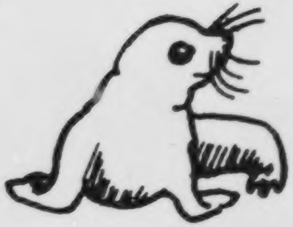

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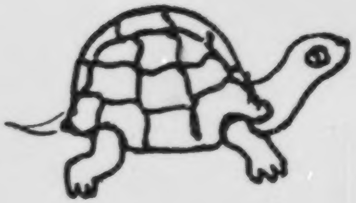

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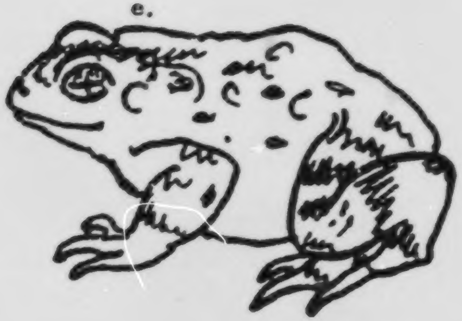

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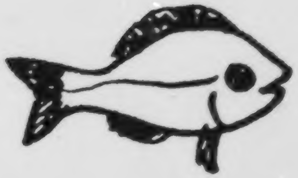
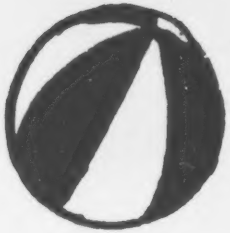
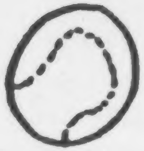
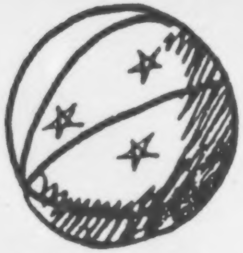


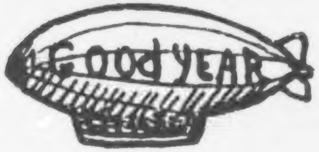
CLASSIFICATION MULTIPLE CHOICE - Example

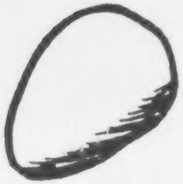
48-LB

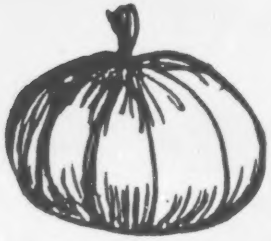


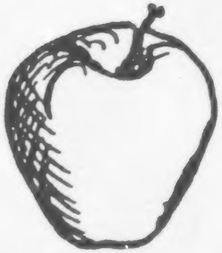


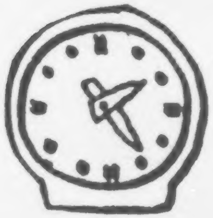


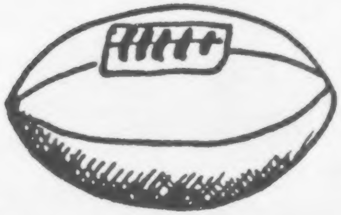












CLASSIFICATION MULTIPLE CHOICE - 1

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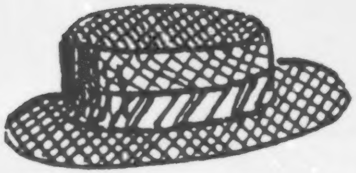
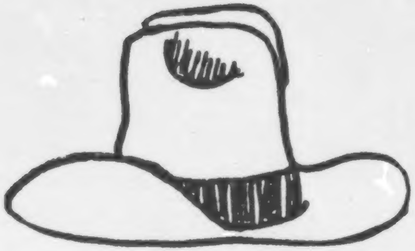
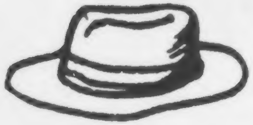
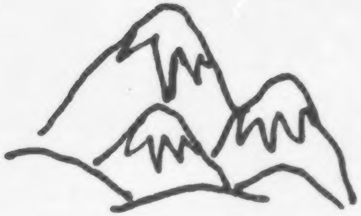
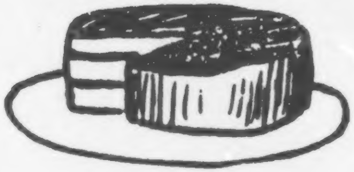
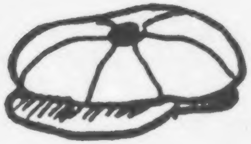
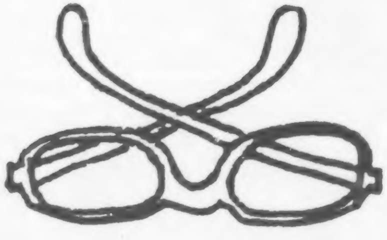
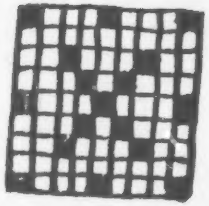
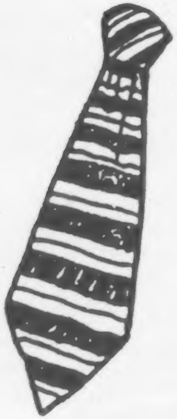
CLASSIFICATION MULTIPLE CHOICE - 2

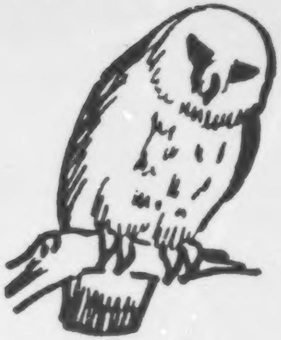




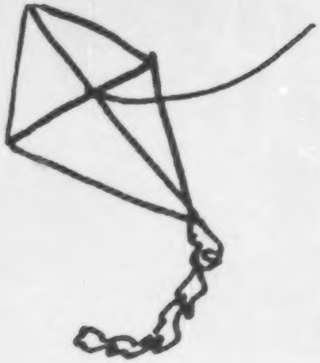




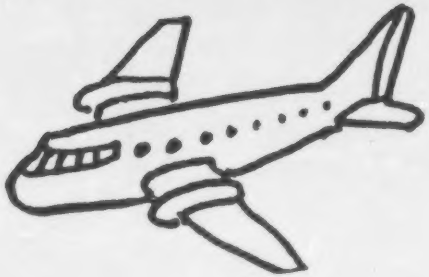
50-LB

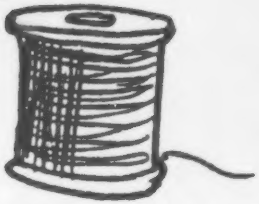
164

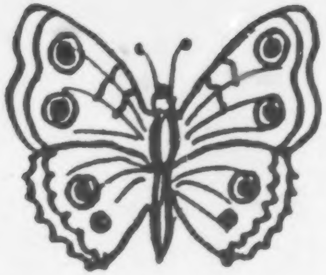
165

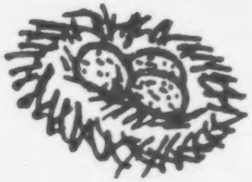




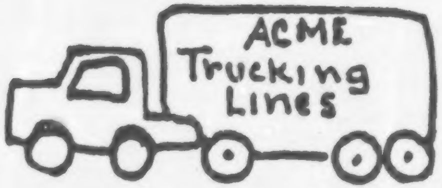


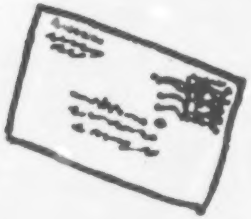


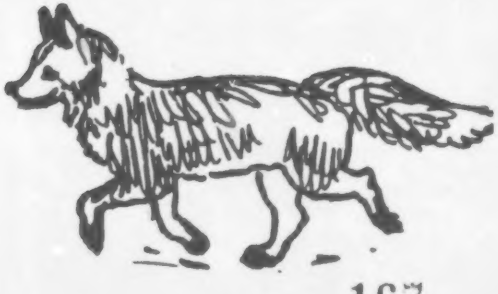


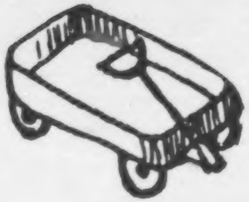


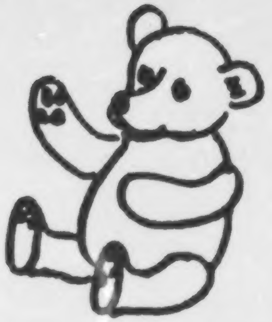
CLASSIFICATION MULTIPLE CHOICE - 3

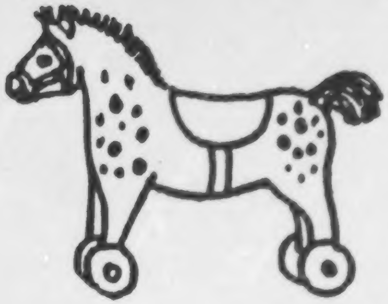

ACME
Trucking
Lines

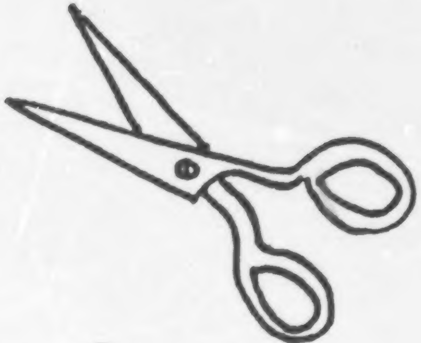


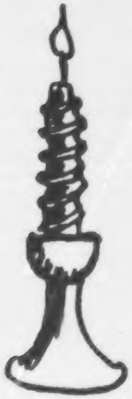


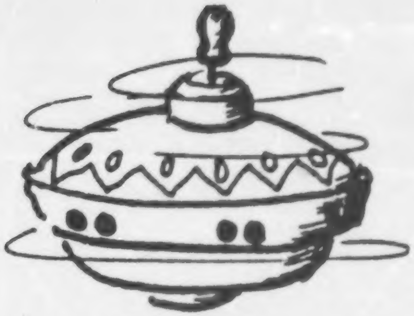


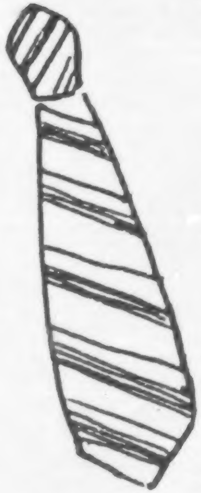


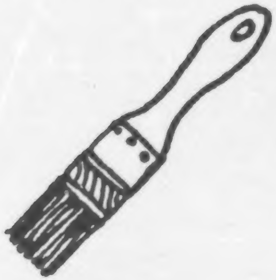


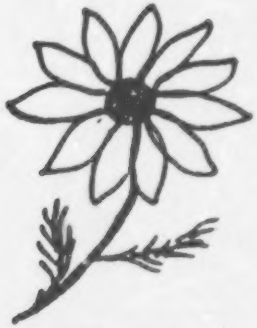




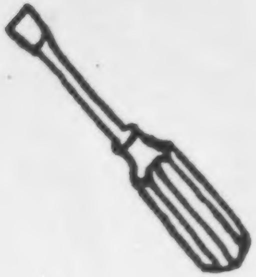


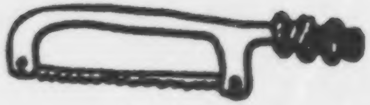


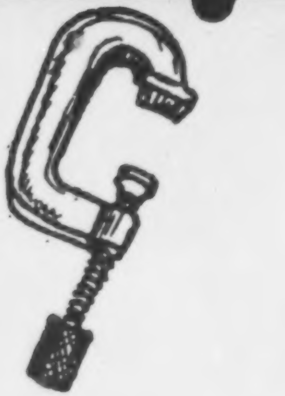


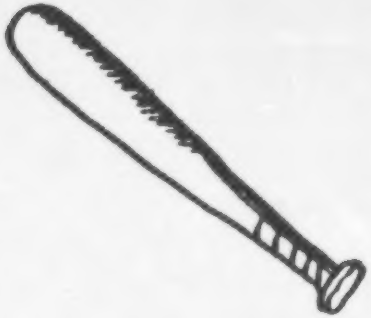


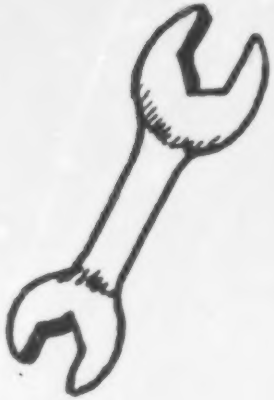
CLASSIFICATION MULTIPLE CHOICE - 4

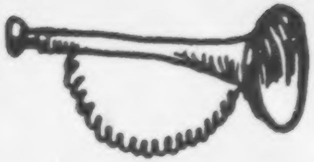


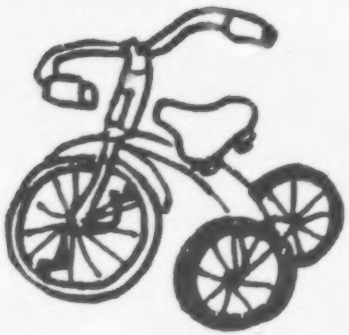


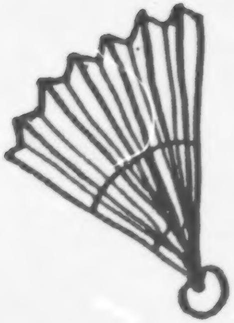


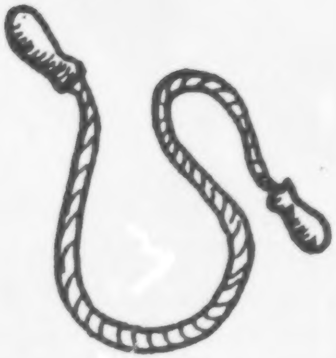






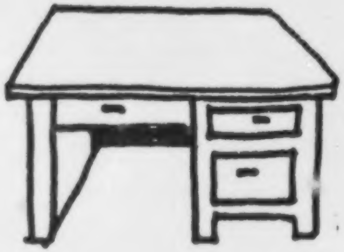


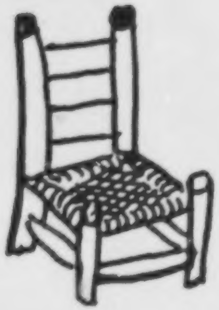


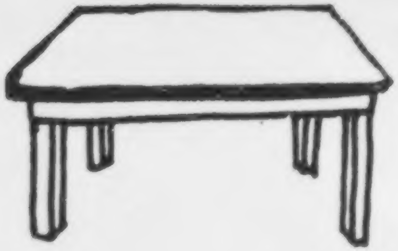


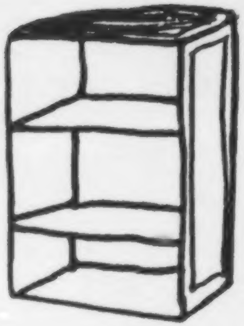
CLASSIFICATION MULTIPLE CHOICE - 5

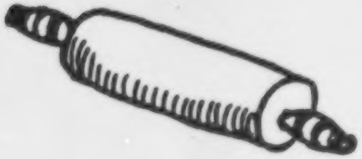
53-LB

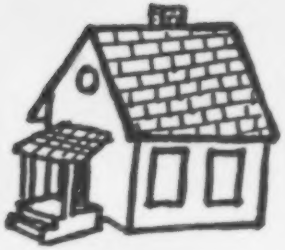


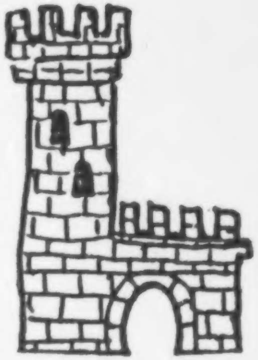


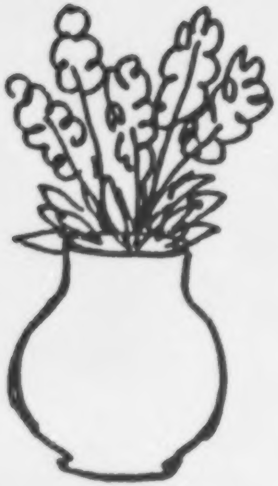


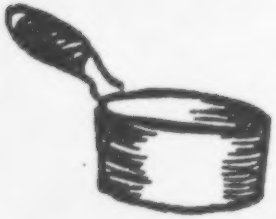






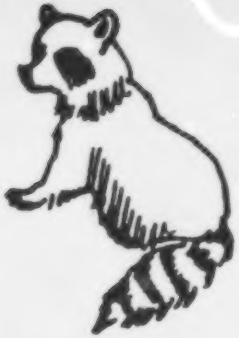


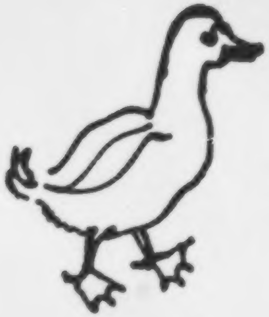


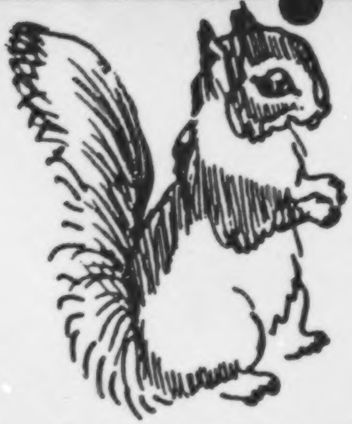


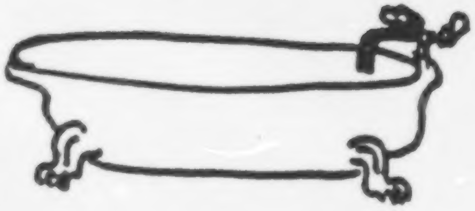
CLASSIFICATION MULTIPLE CHOICE - 6

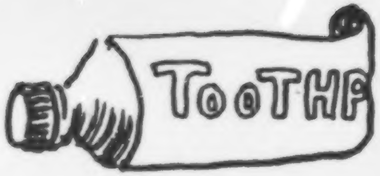
54-LB

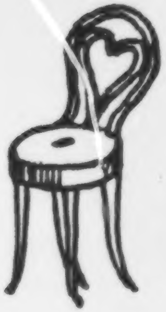




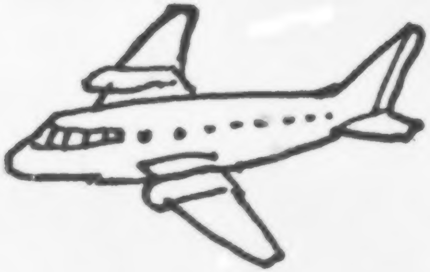


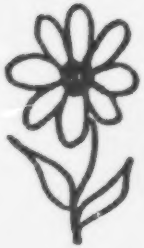


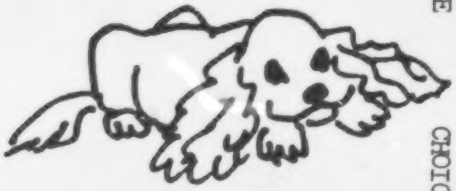




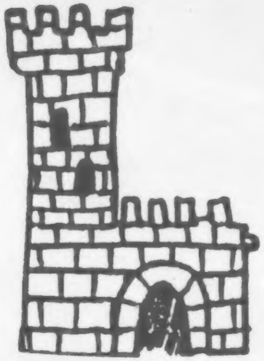
CLASSIFICATION MULTIPLE CHOICE - 7

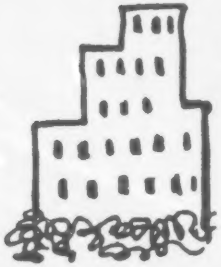


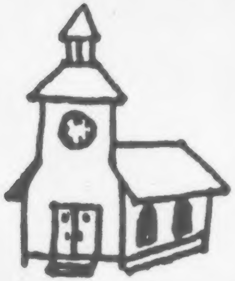


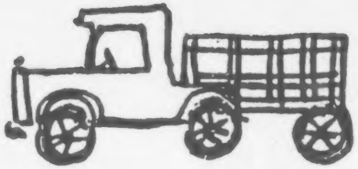


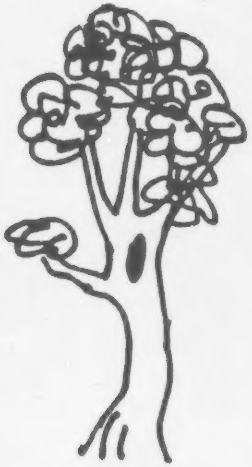
55-LB

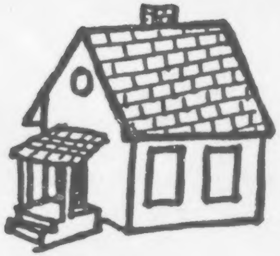


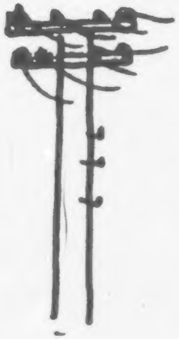


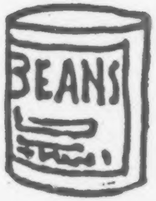


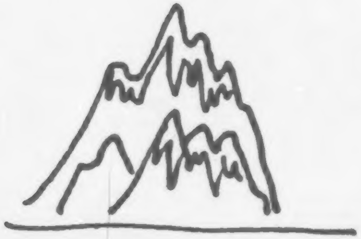




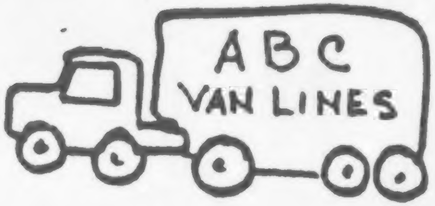


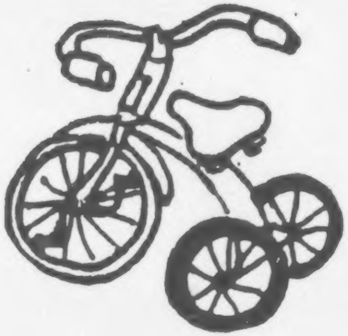


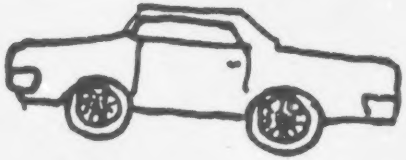


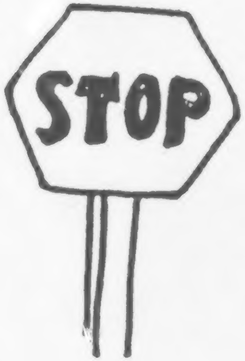


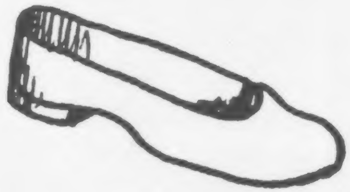
CLASSIFICATION MULTIPLE CHOICE - 8

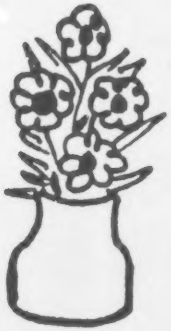

ABC
VAN LINES

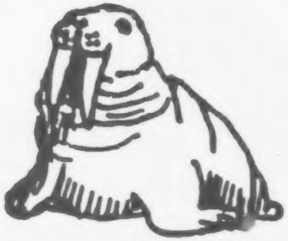


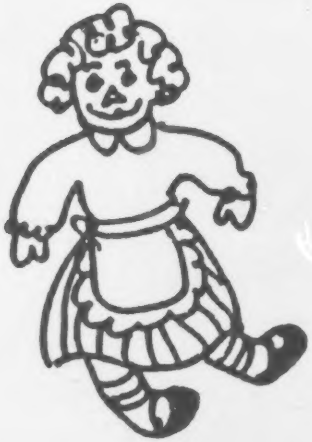


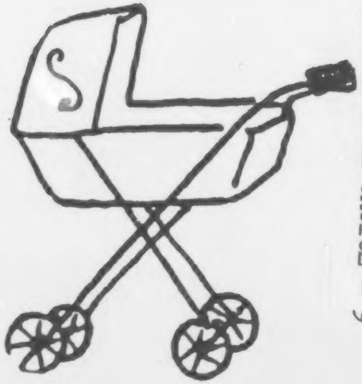






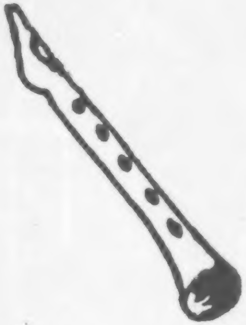
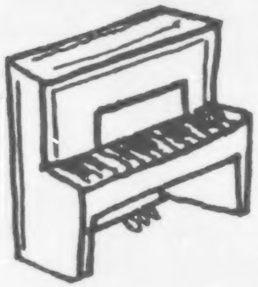
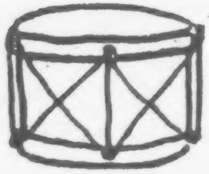


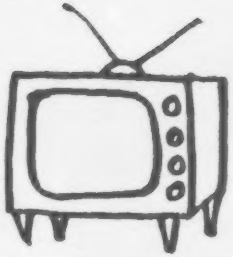
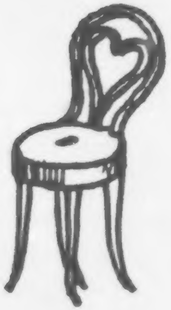
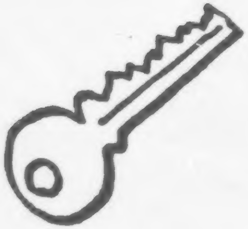




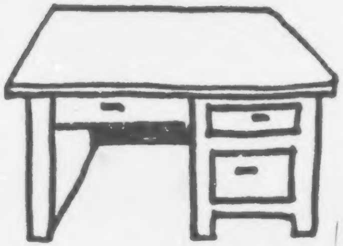
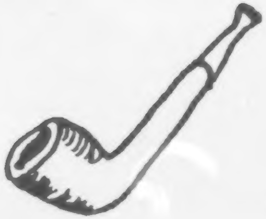
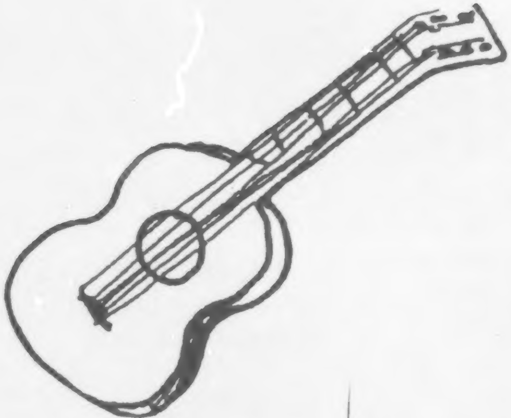
CLASSIFICATION MULTIPLE CHOICE - 9

57-LB

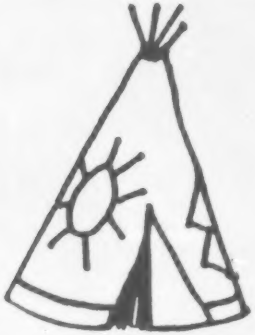




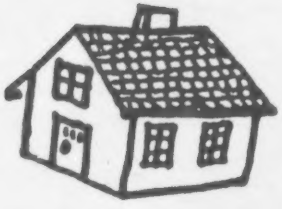




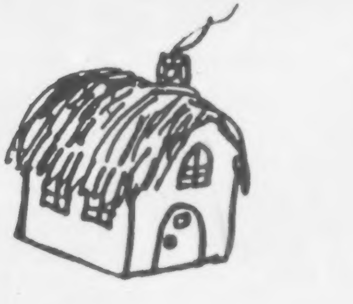
CLASSIFICATION MULTIPLE CHOICE - 10

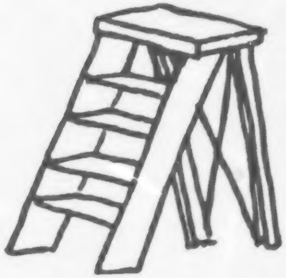




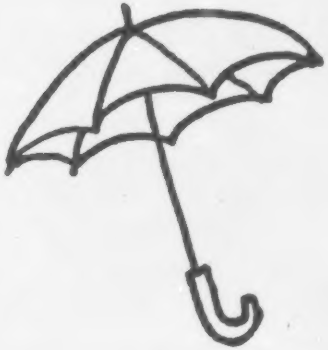
58-LB

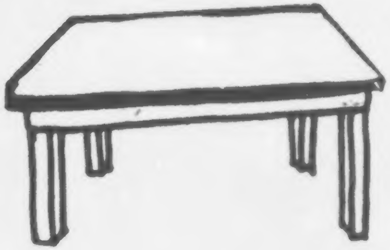


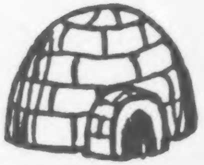


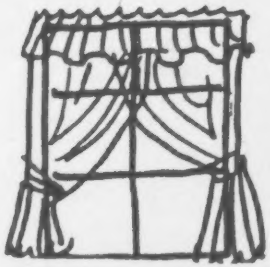


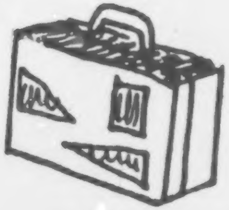












CLASSIFICATION MULTIPLE CHOICE - 11

59-LB

182

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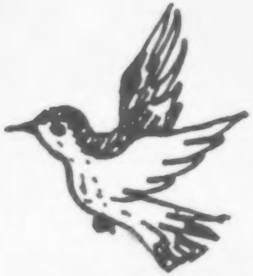
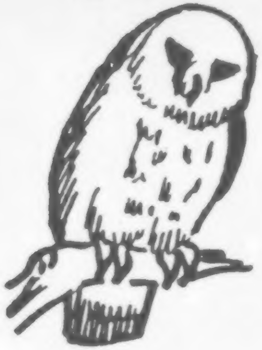
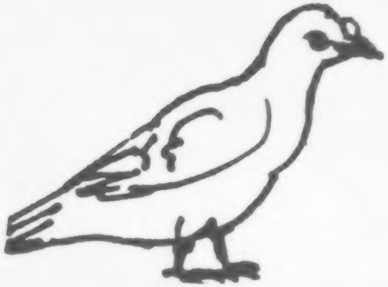

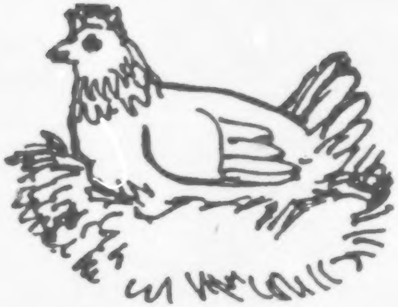
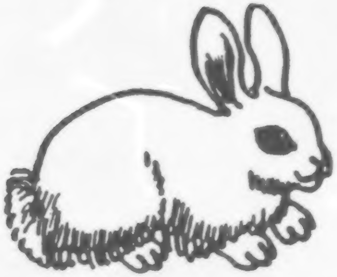
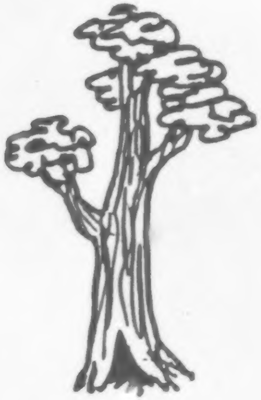

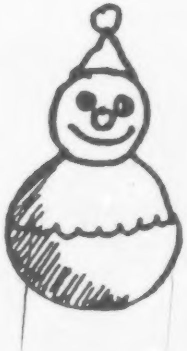
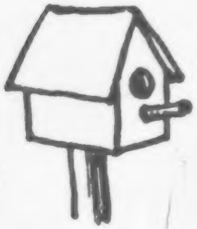
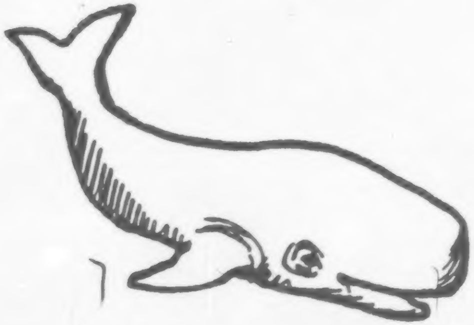

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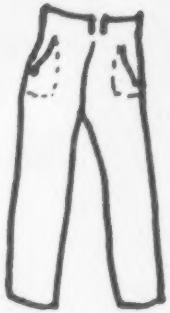
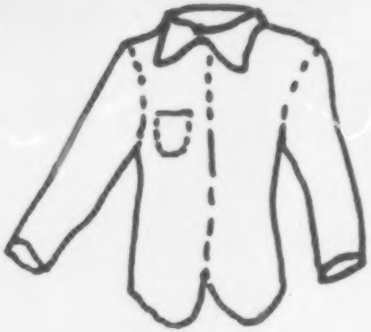
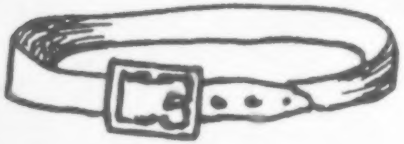
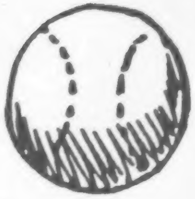
CLASSIFICATION MULTIPLE CHOICE - 12

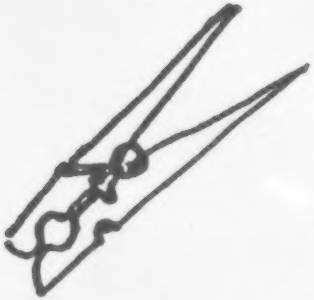
60-LB

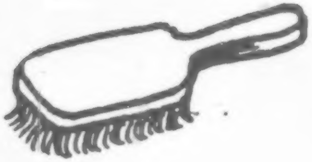


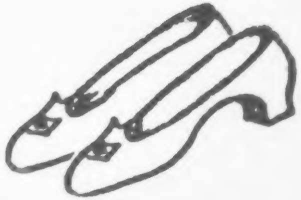


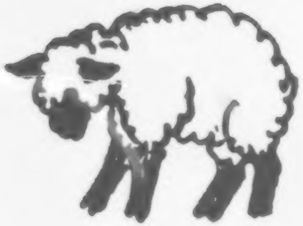


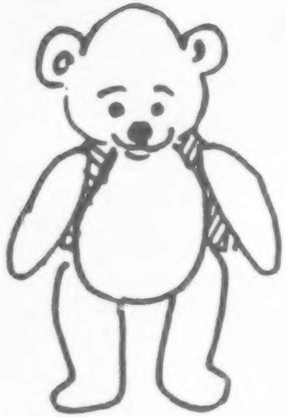












CLASSIFICATION MULTIPLE CHOICE - 13

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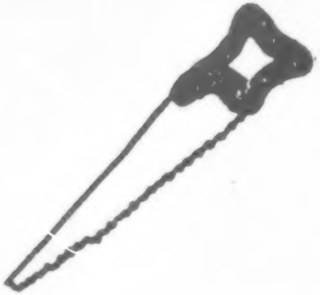
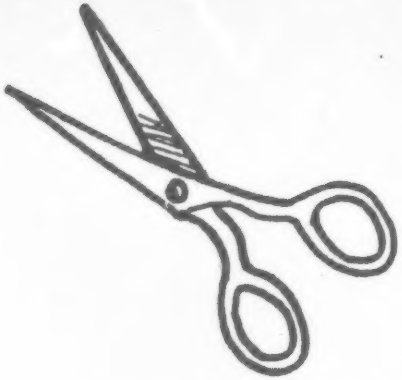
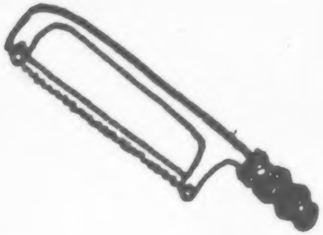
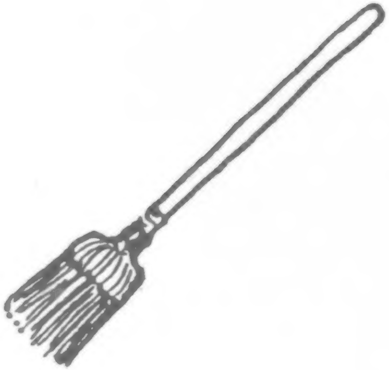
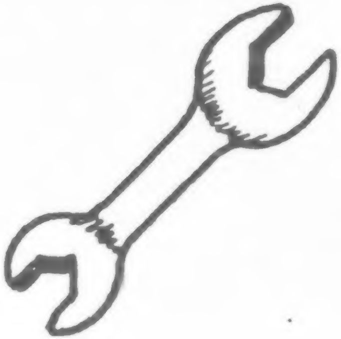
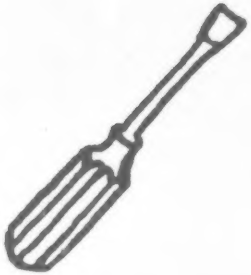


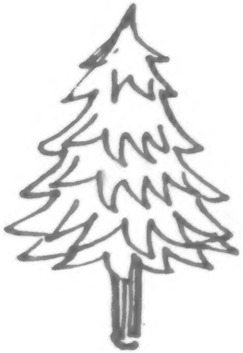


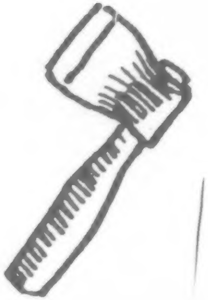


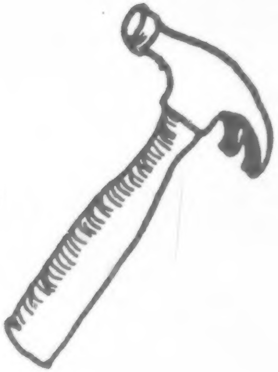




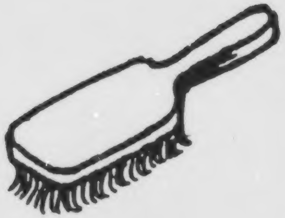


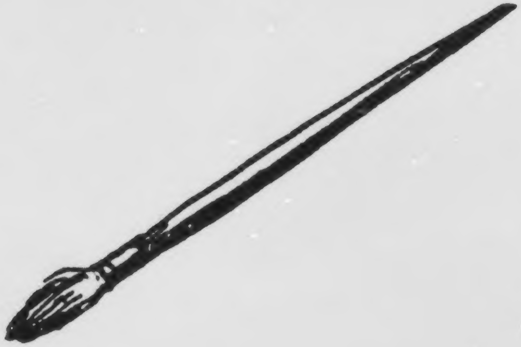


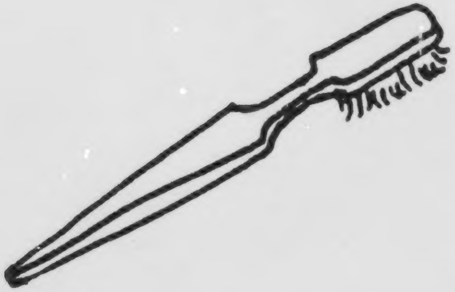


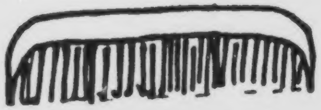


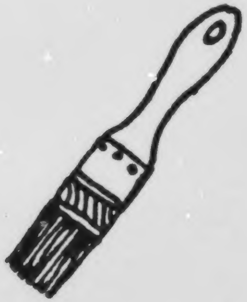
CLASSIFICATION MULTIPLE CHOICE - 14

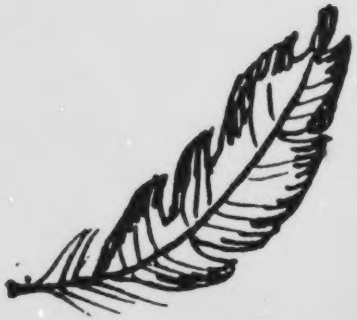




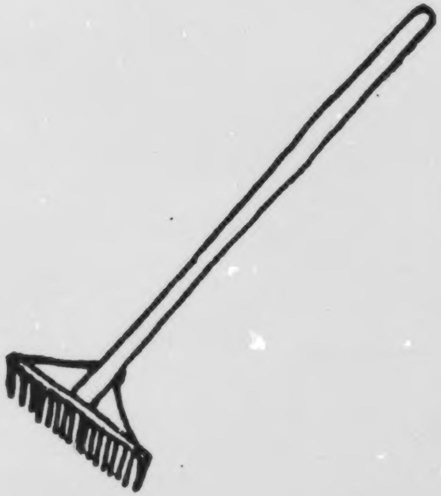


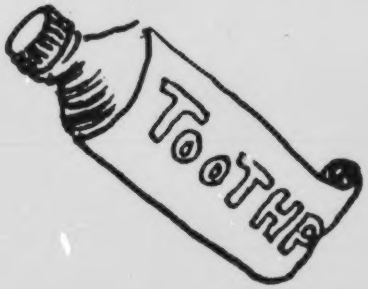


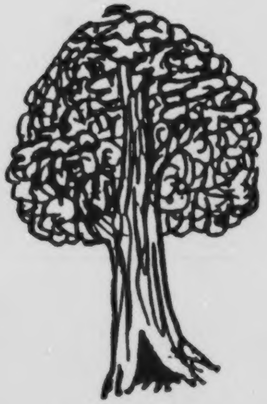




CLASSIFICATION MULTIPLE CHOICE - 15







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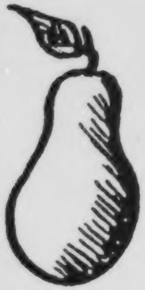

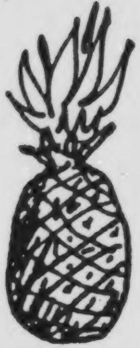

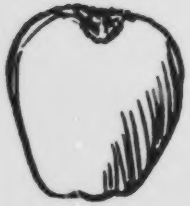

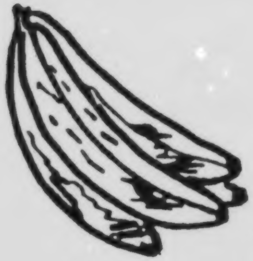

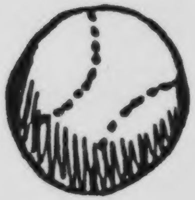

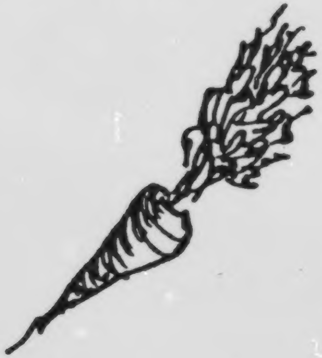

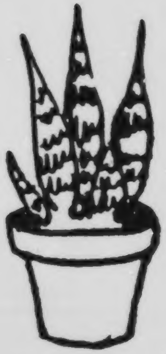

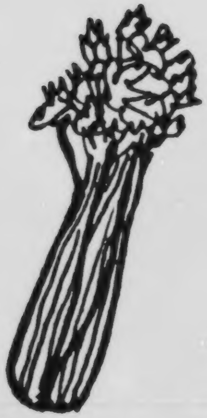

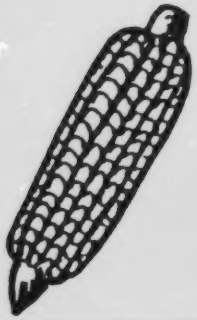

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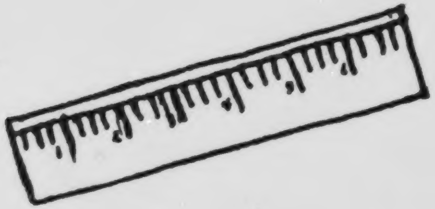
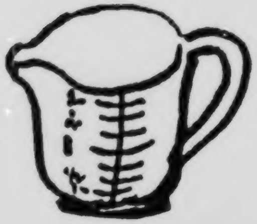
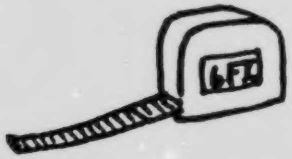
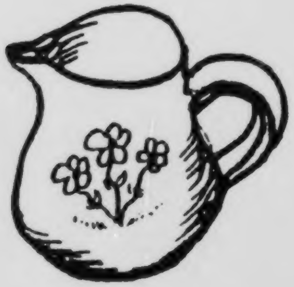
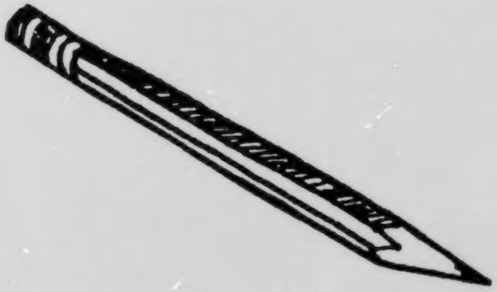
CLASSIFICATION MULTIPLE CHOICE - 17

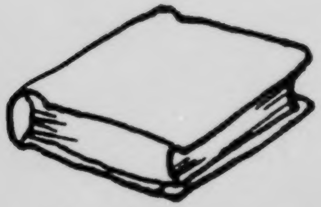


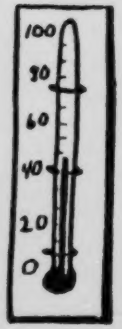


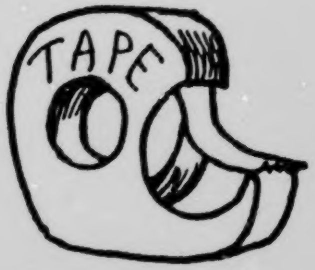


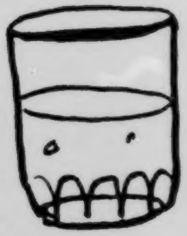


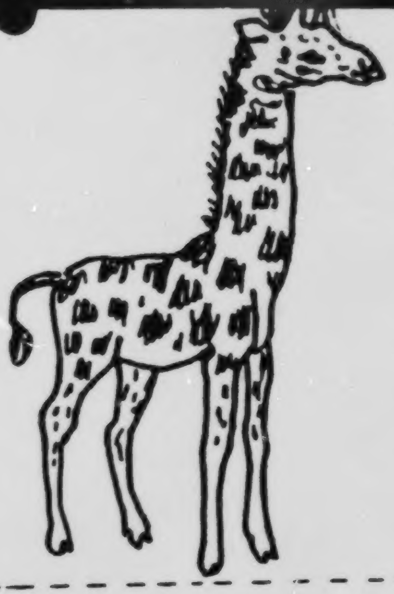


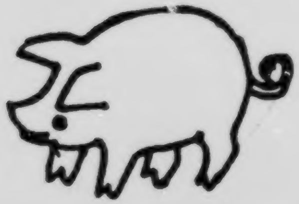


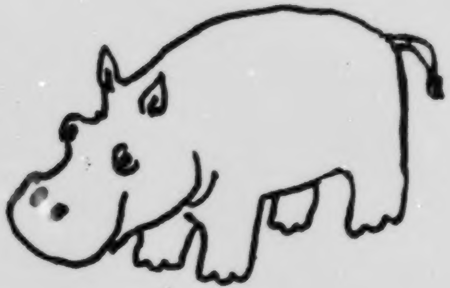

100
80
60
40
20
0

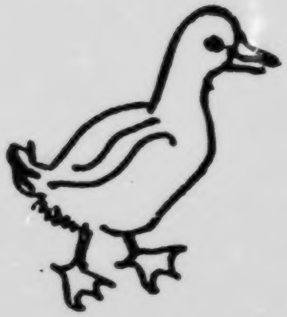


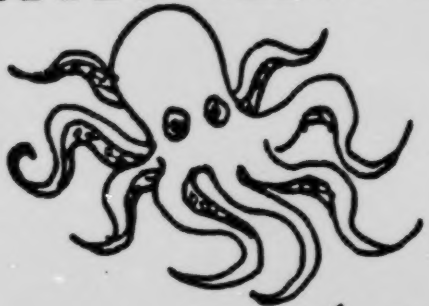


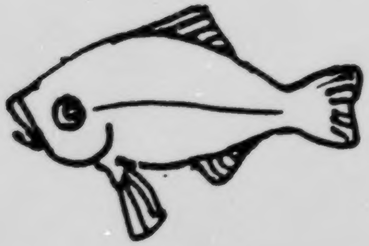


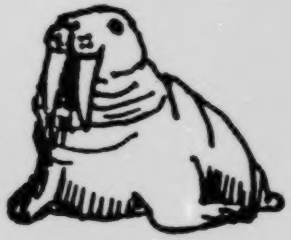


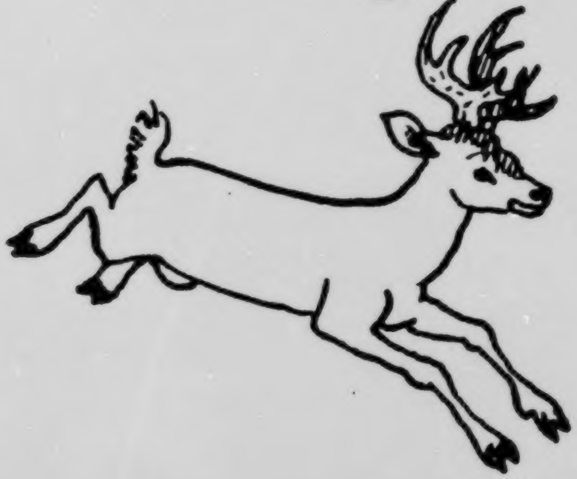


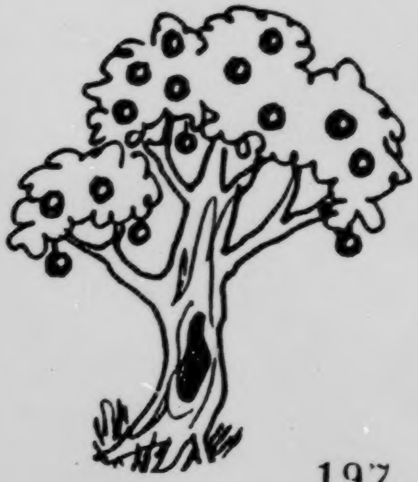






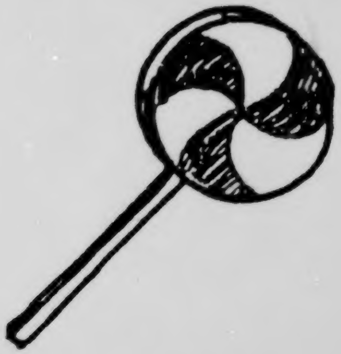


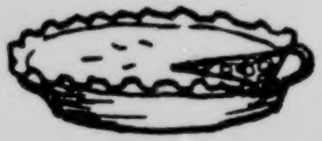


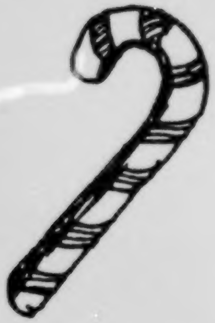


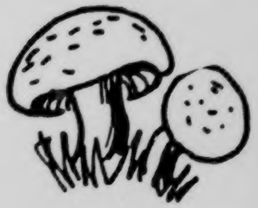
CLASSIFICATION MULTIPLE CHOICE - 18

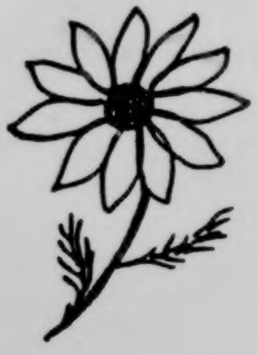
LB-99

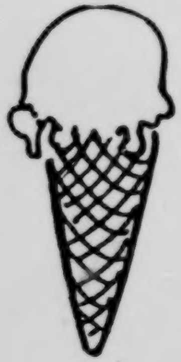




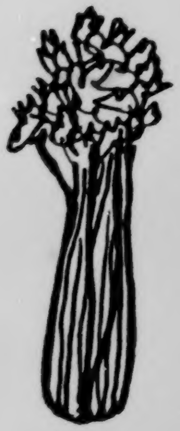


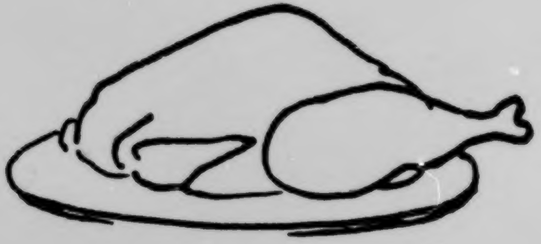


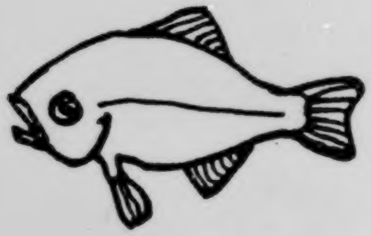




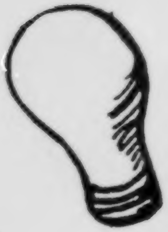
CLASSIFICATION MULTIPLE CHOICE - 19

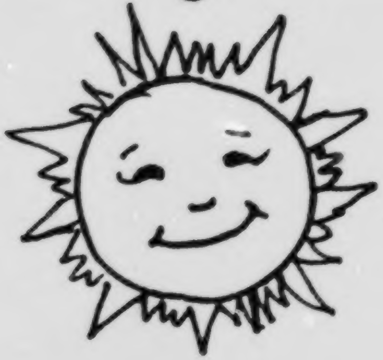


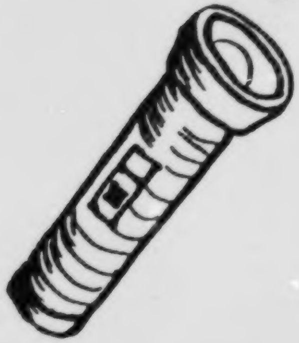


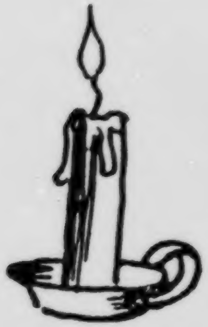


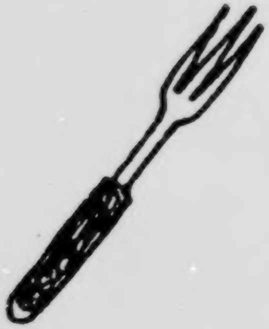
67-LB

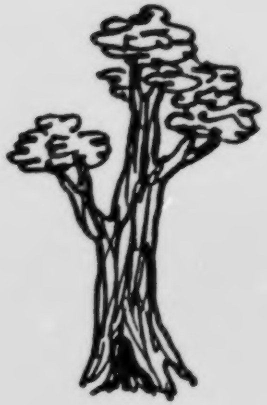




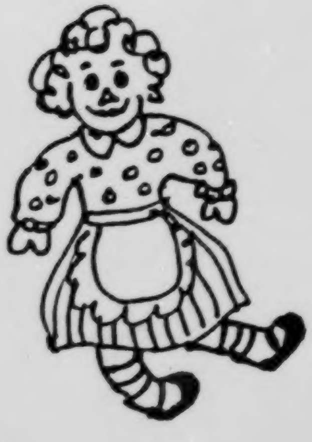


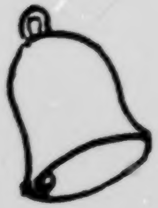


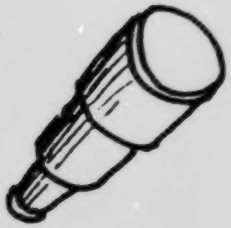




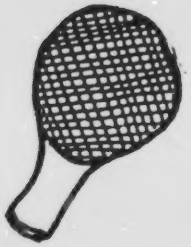
CLASSIFICATION MULTIPLE CHOICE - 20

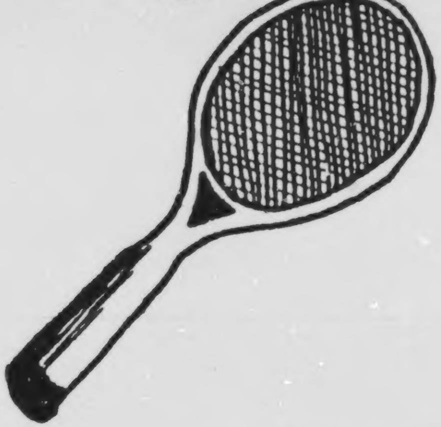


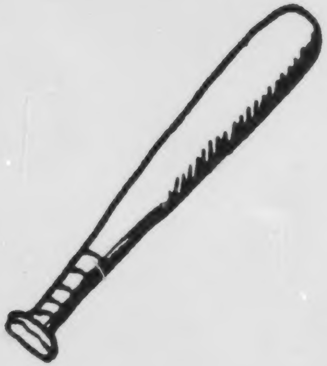


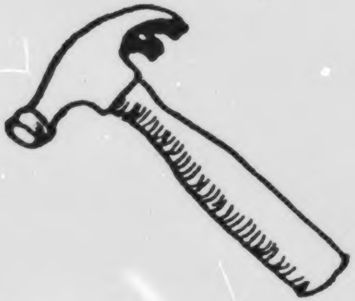


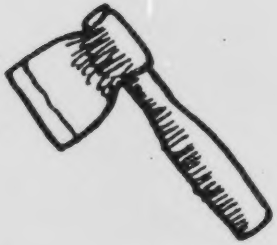
68-LB

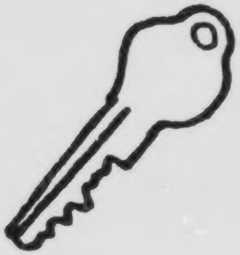


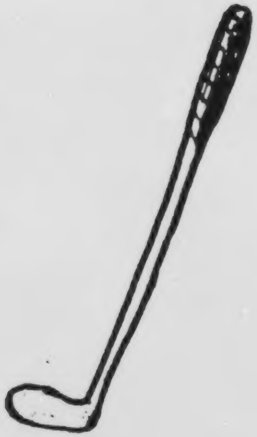


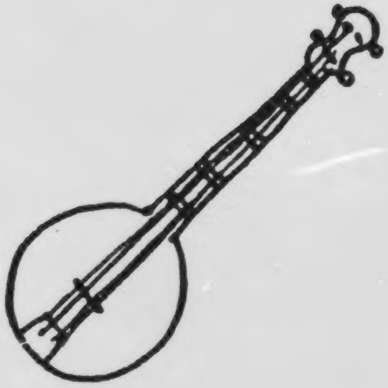


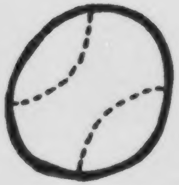




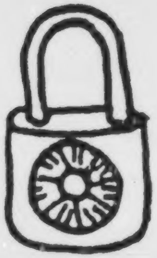


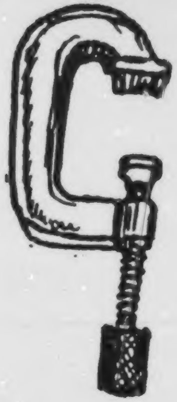


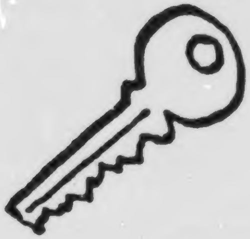


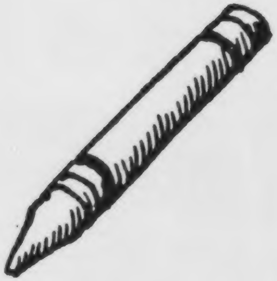


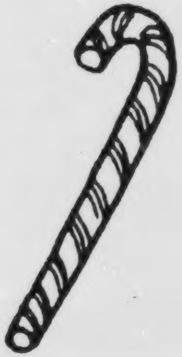
CLASSIFICATION MULTIPLE CHOICE - 21

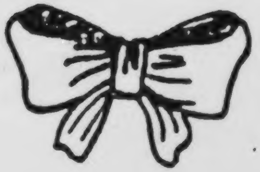


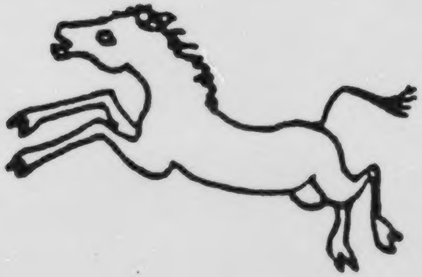


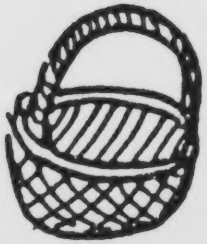


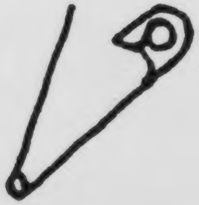




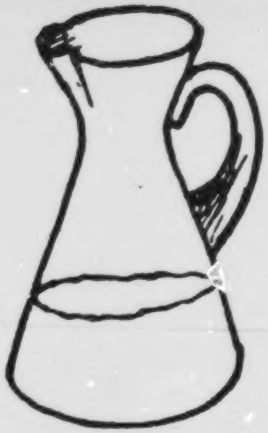


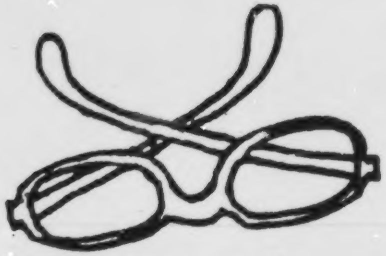


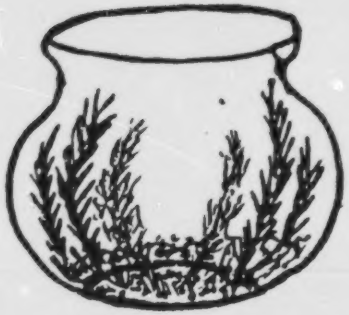


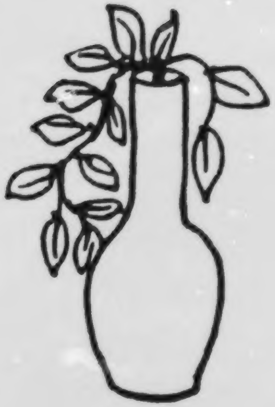


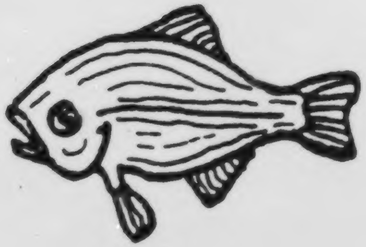
CLASSIFICATION MULTIPLE CHOICE - 22

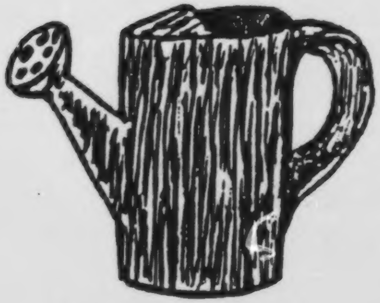




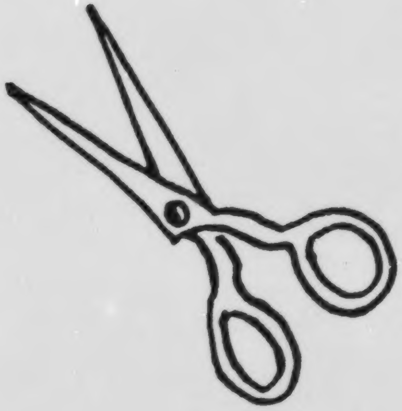


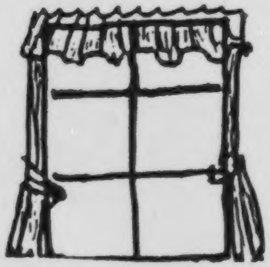


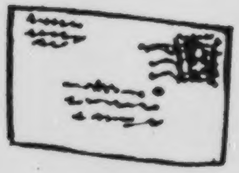




CLASSIFICATION MULTIPLE CHOICE - 23



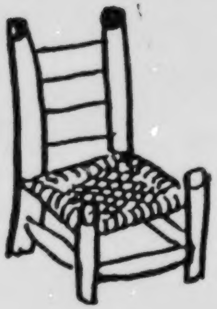


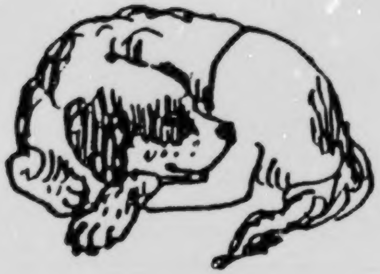


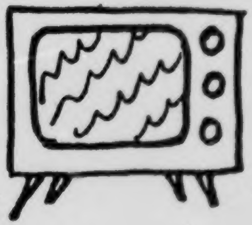
71-LB

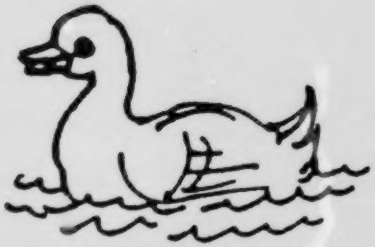
206

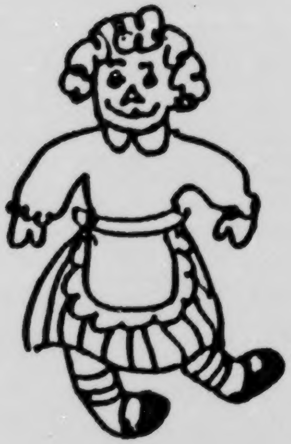
207

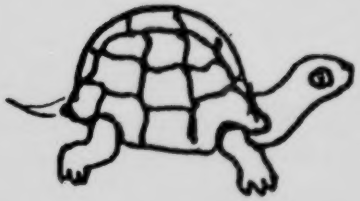


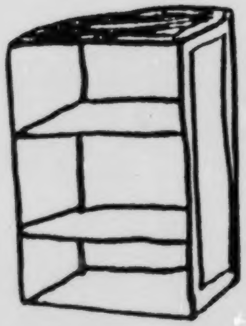


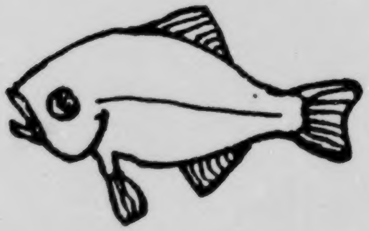


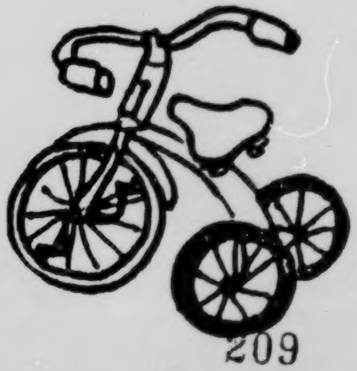






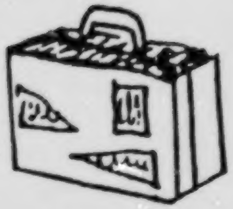


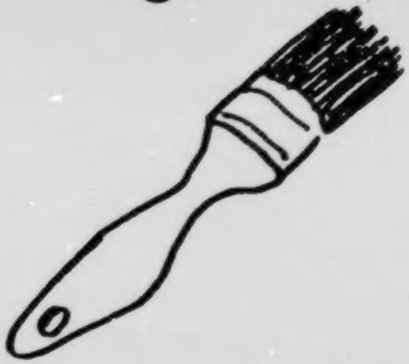


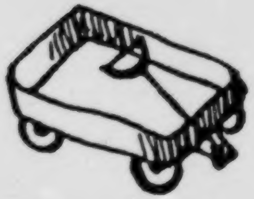


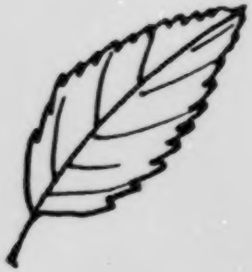
CLASSIFICATION MULTIPLE CHOICE - 24

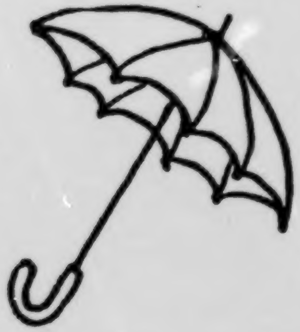
724B

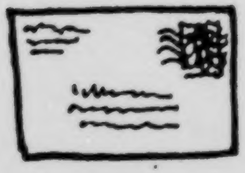


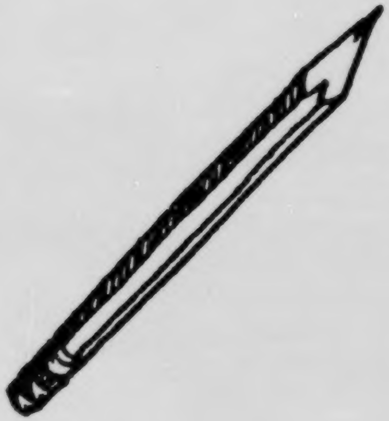


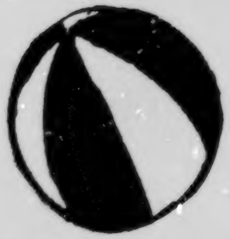


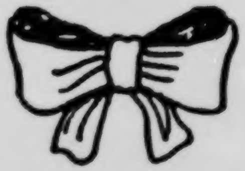






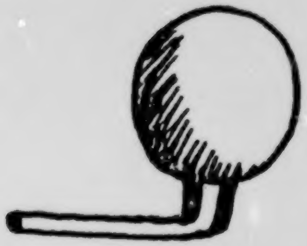


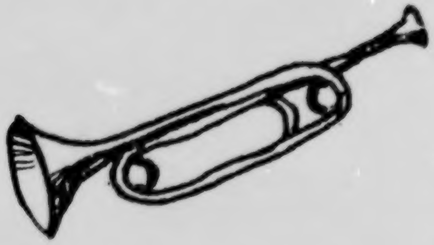


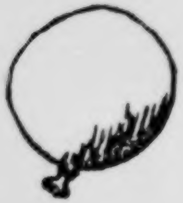


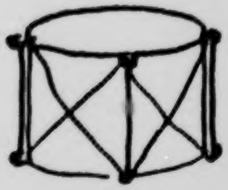
CLASSIFICATION MULTIPLE CHOICE - 25

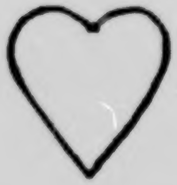
73-LB

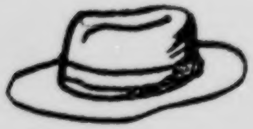


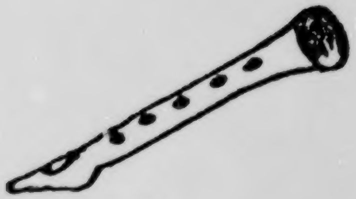


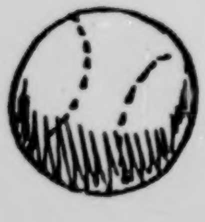


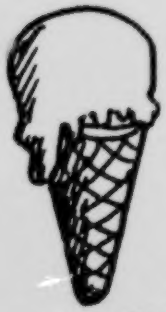






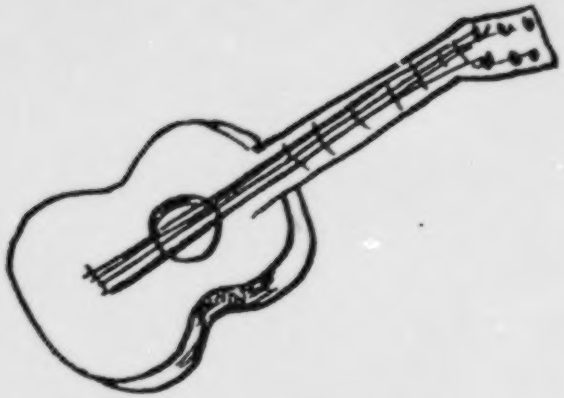


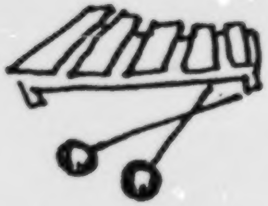


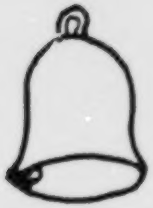


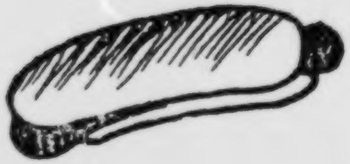
CLASSIFICATION MULTIPLE CHOICE -.26

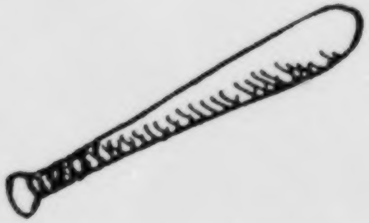
74-LB

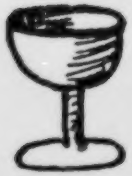


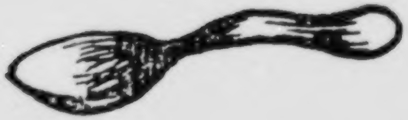


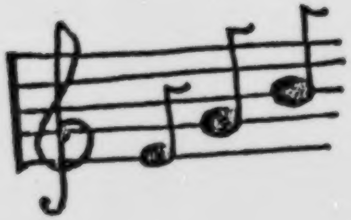


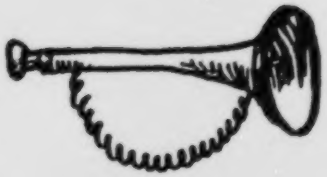






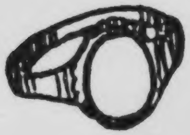


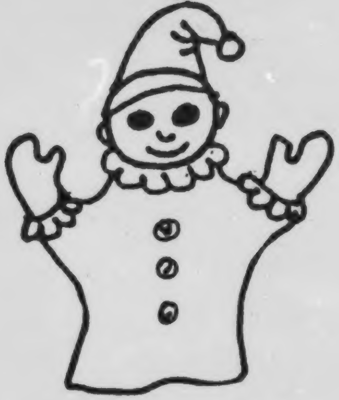


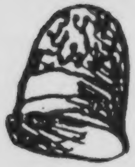


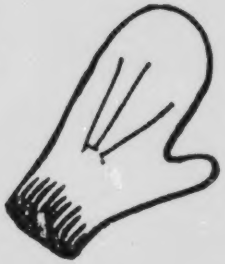
CLASSIFICATION MULTIPLE CHOICE - 27

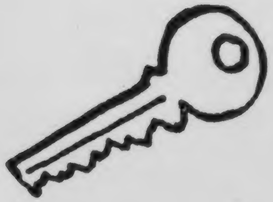
75-LB

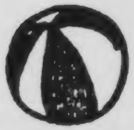


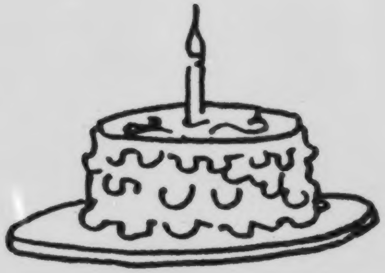


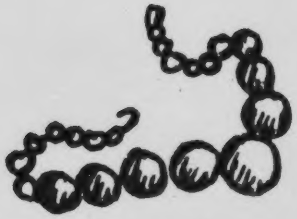


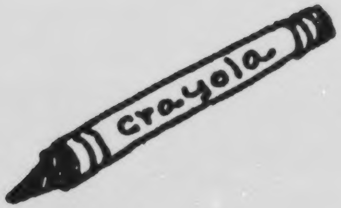




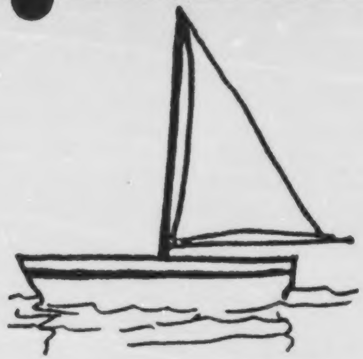


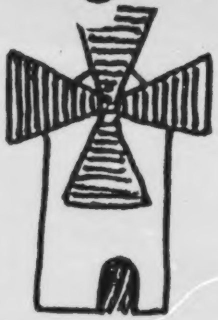


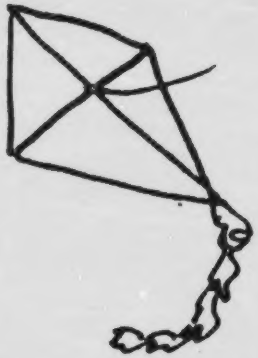


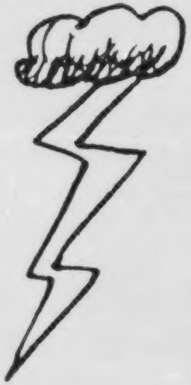


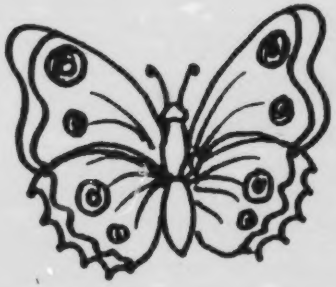
CLASSIFICATION MULTIPLE CHOICE - 28

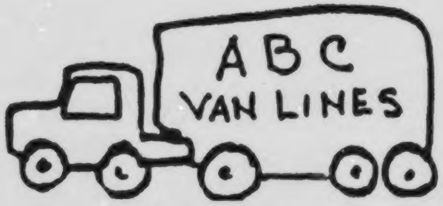


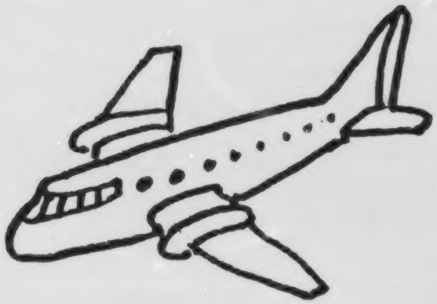


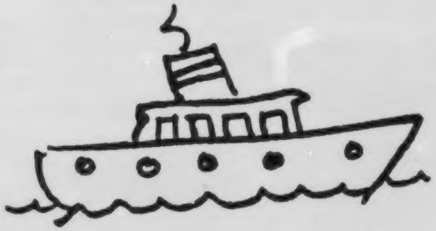


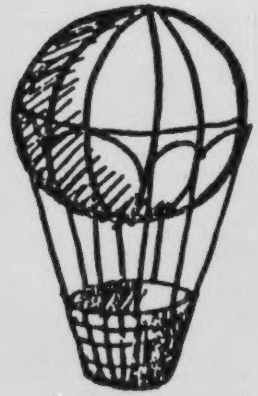




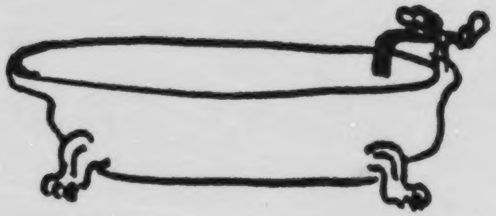

ABC
VAN LINES

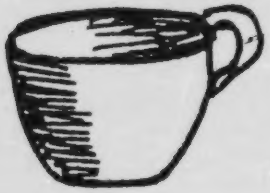


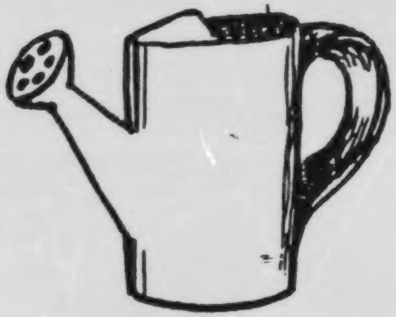


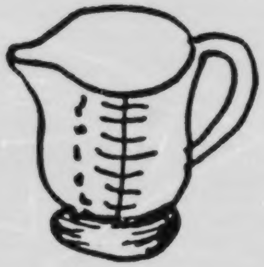


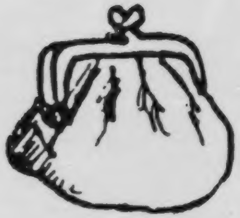
CLASSIFICATION MULTIPLE CHOICE - 29

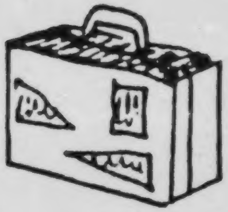


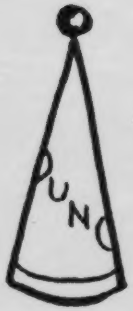


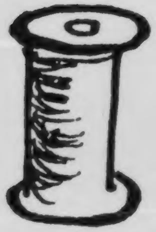


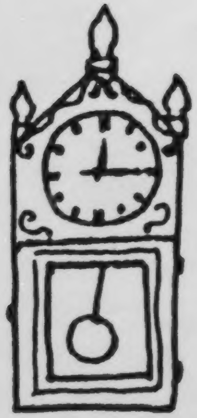






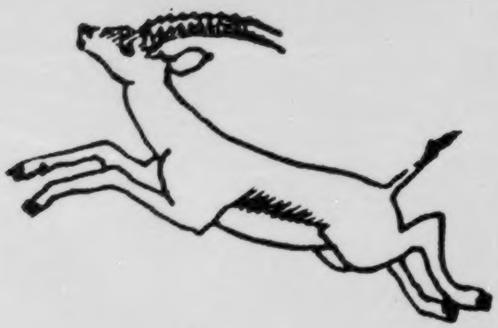


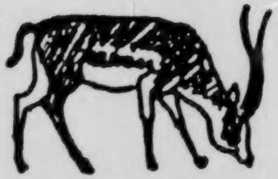


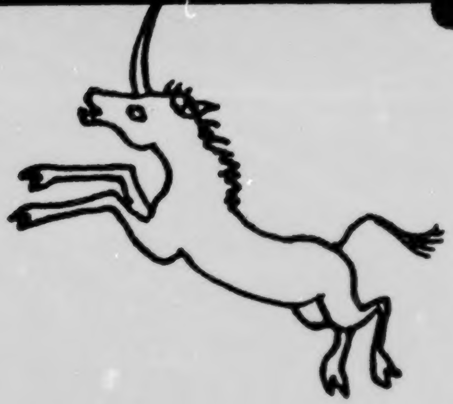


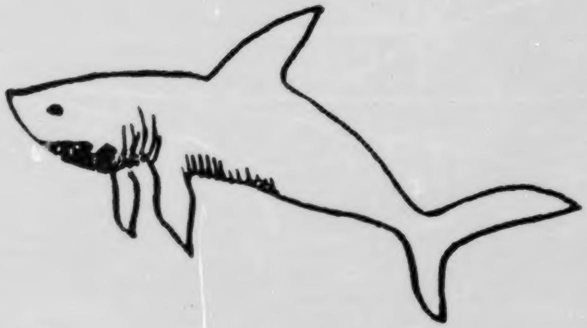
CLASSIFICATION MULTIPLE CHOICE - 30

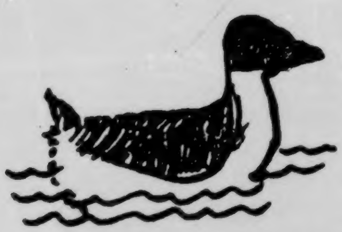
78-LB

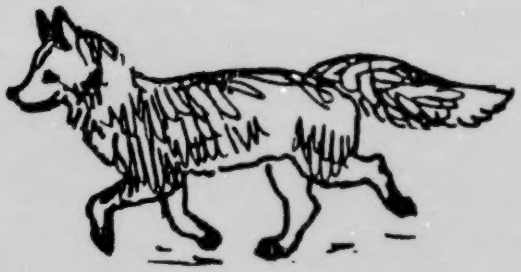




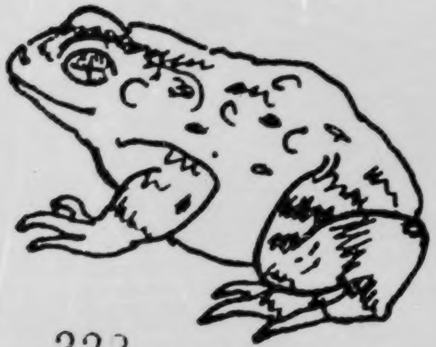


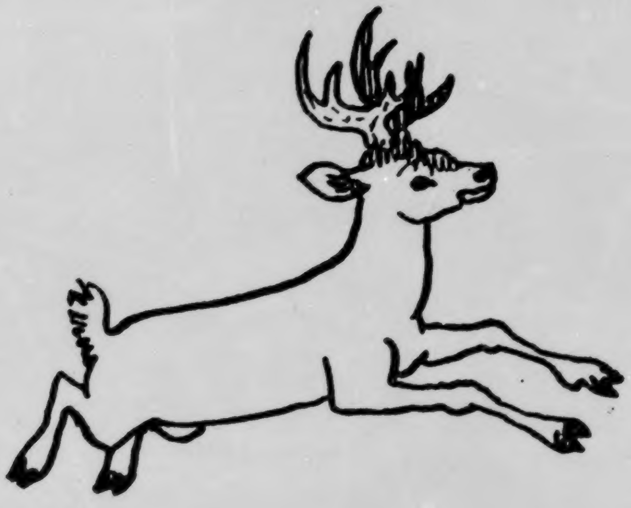


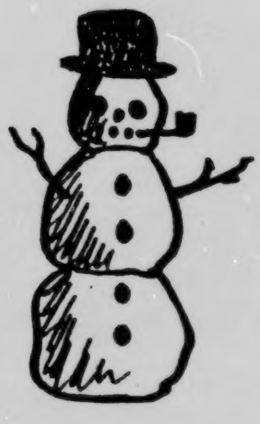




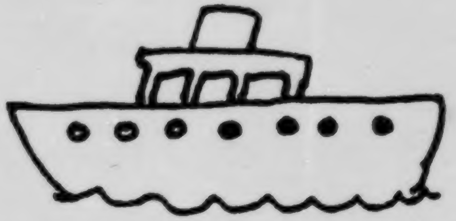
CLASSIFICATION MULITPLE CHOICE - 31

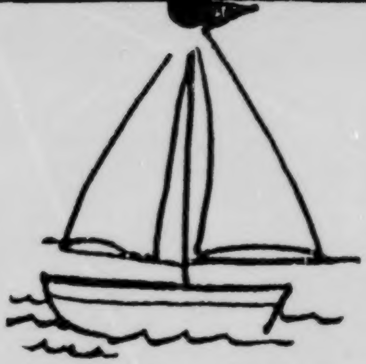


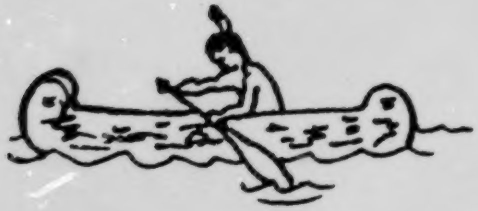


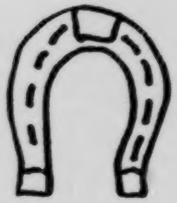


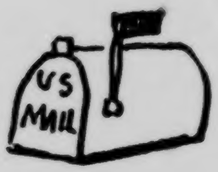
79-LB

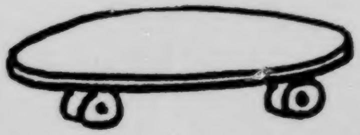


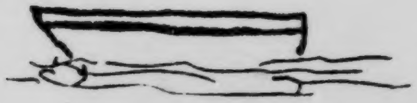


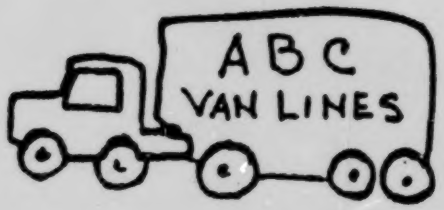


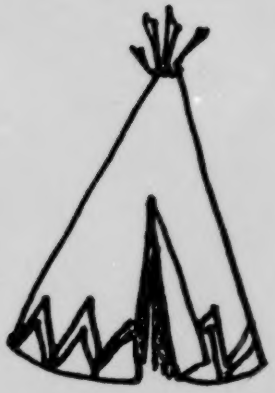









ABC
VAN LINES

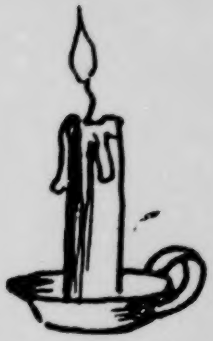


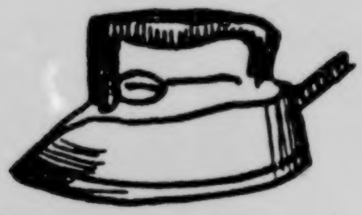
CLASSIFICATION MULTIPLE CHOICE. - 32

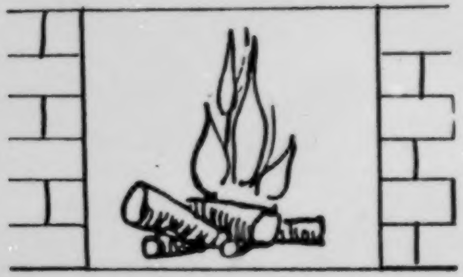
ET-08

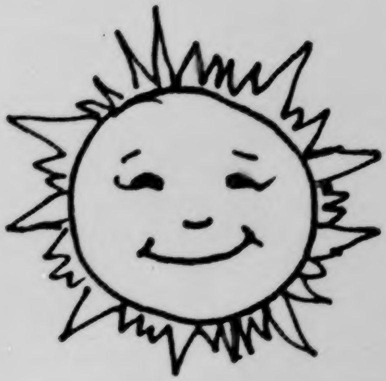
224

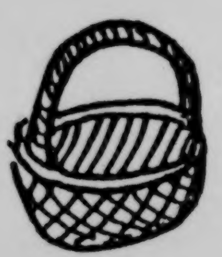
225

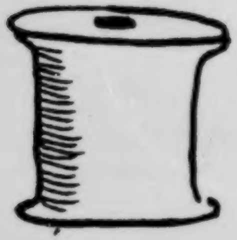




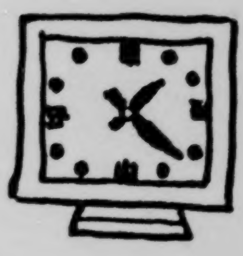


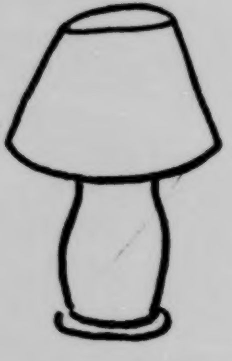


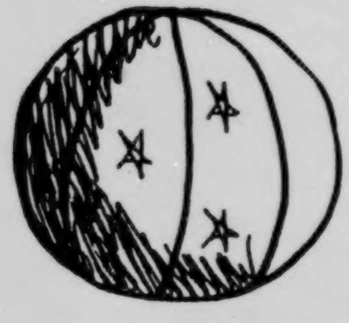


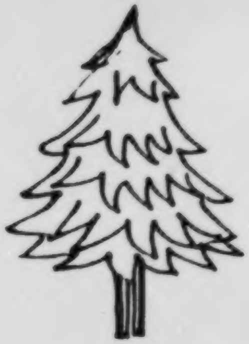


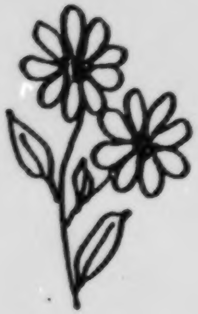
CLASSIFICATION MULTIPLE CHOICE - 33

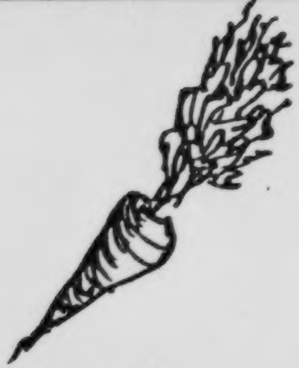


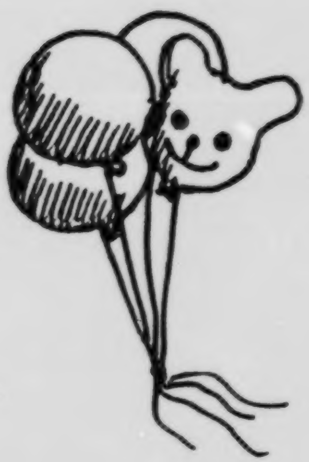


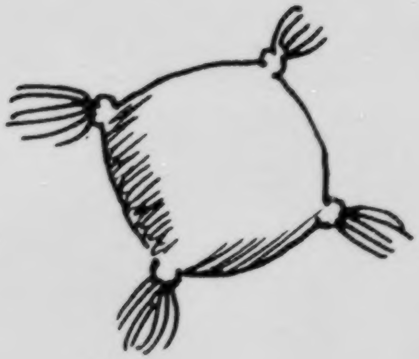


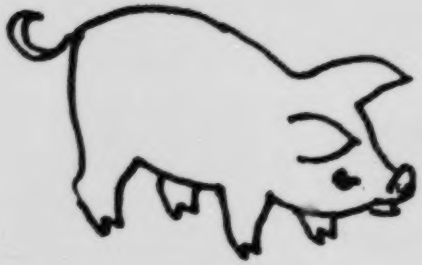


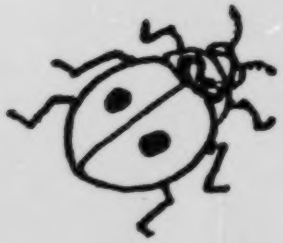


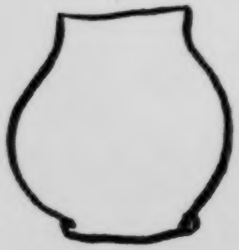


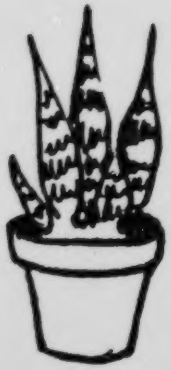






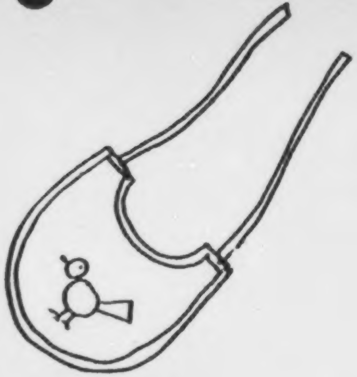


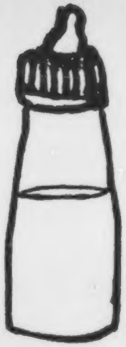


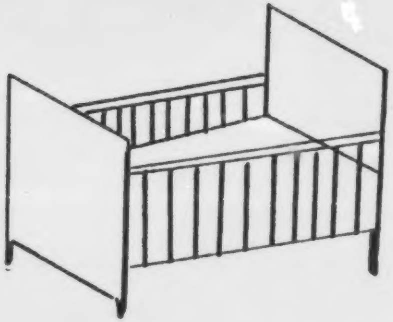


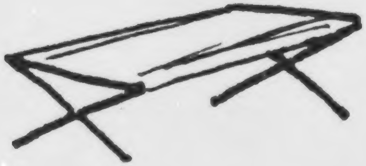
CLASSIFICATION MULTIPLE CHOICE - 34

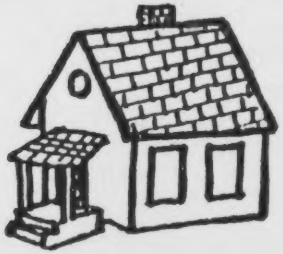
82-LB

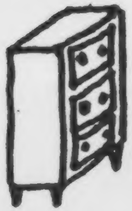


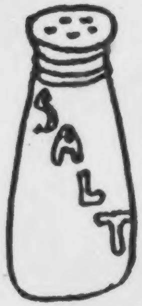








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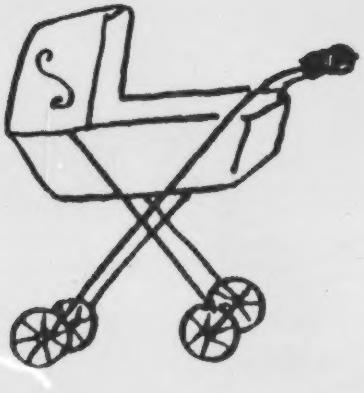
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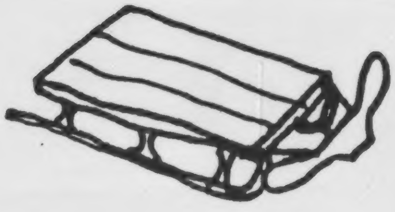
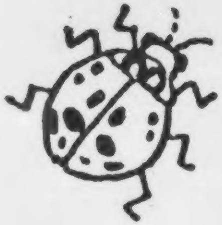
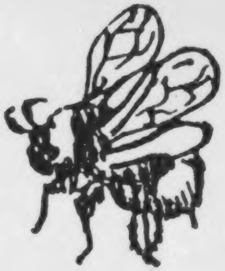
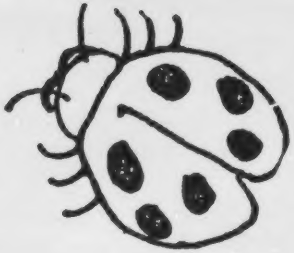
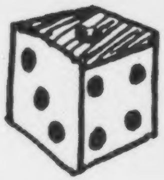
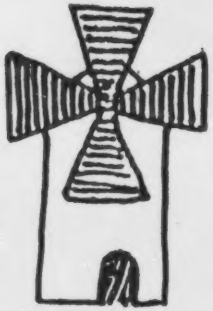
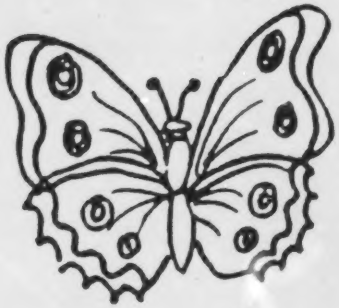
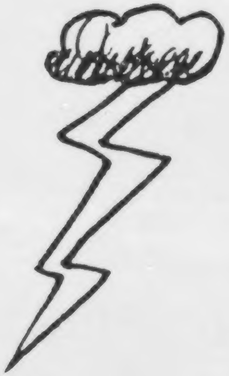
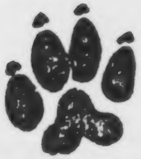
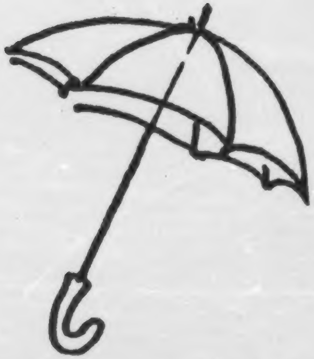


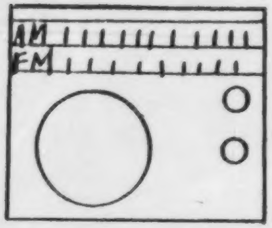




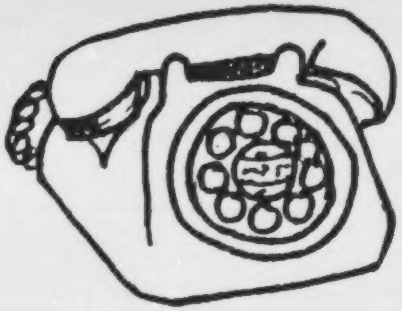




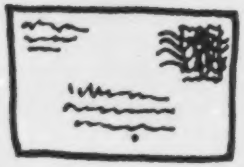




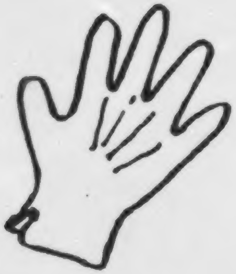
CLASSIFICATION MULTIPLE CHOICE - 36

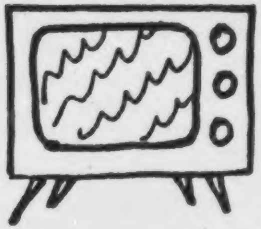
84-LB

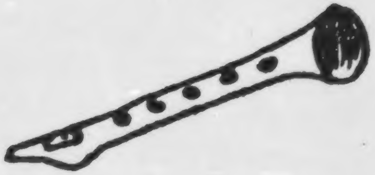


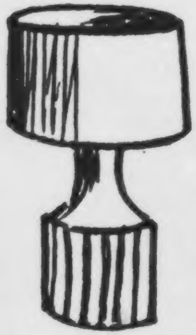


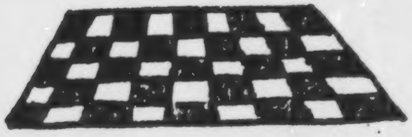


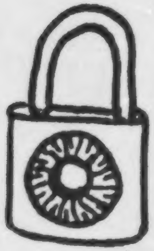






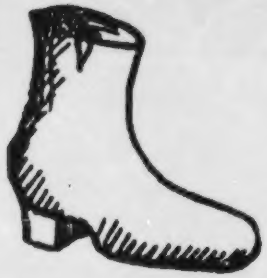


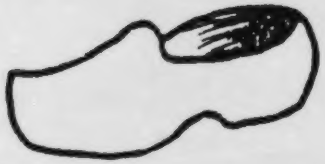


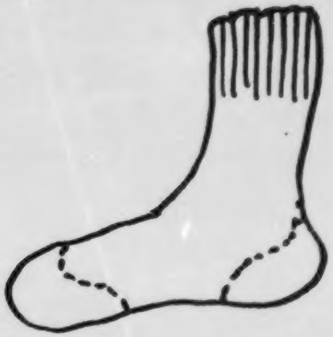


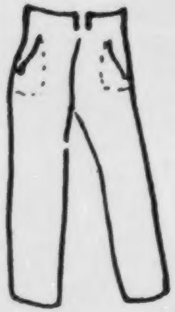
CLASSIFICATION MULTIPLE CHOICE - 37

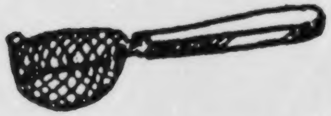
85-LB

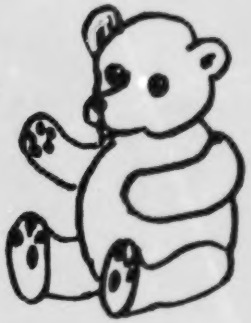




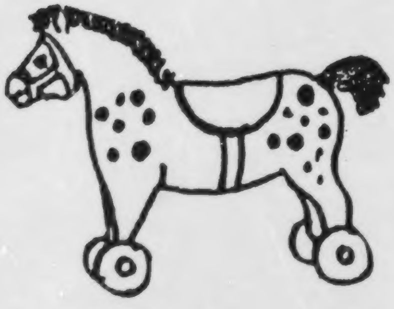


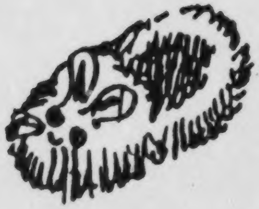


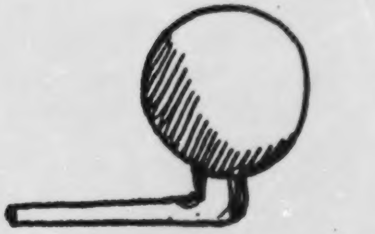




CLASSIFICATION MULTIPLE CHOICE - 38







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86-LB

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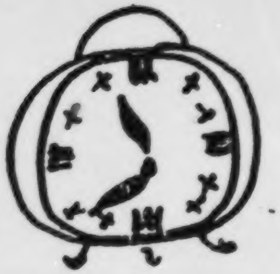

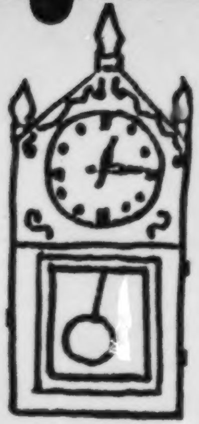

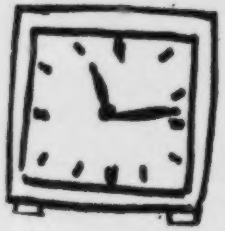

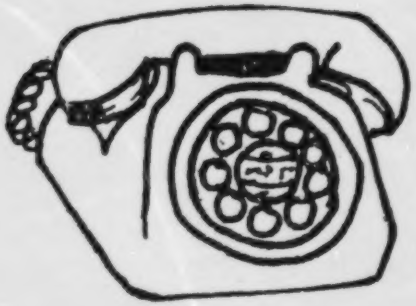

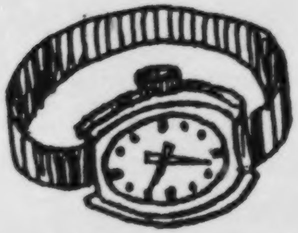

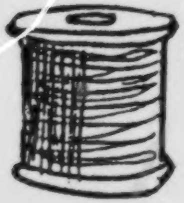

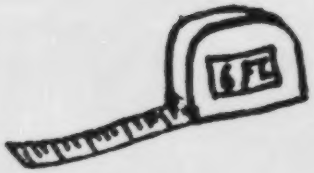

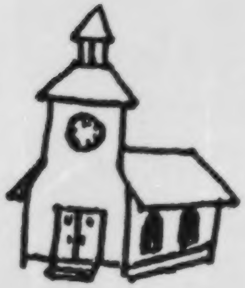

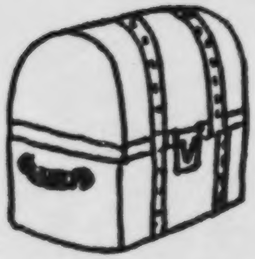

87-LB

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CLASSIFICATION MULTIPLE CHOICE - 39

RIGHT BRAIN HEMISPHERE ACTIVITIES

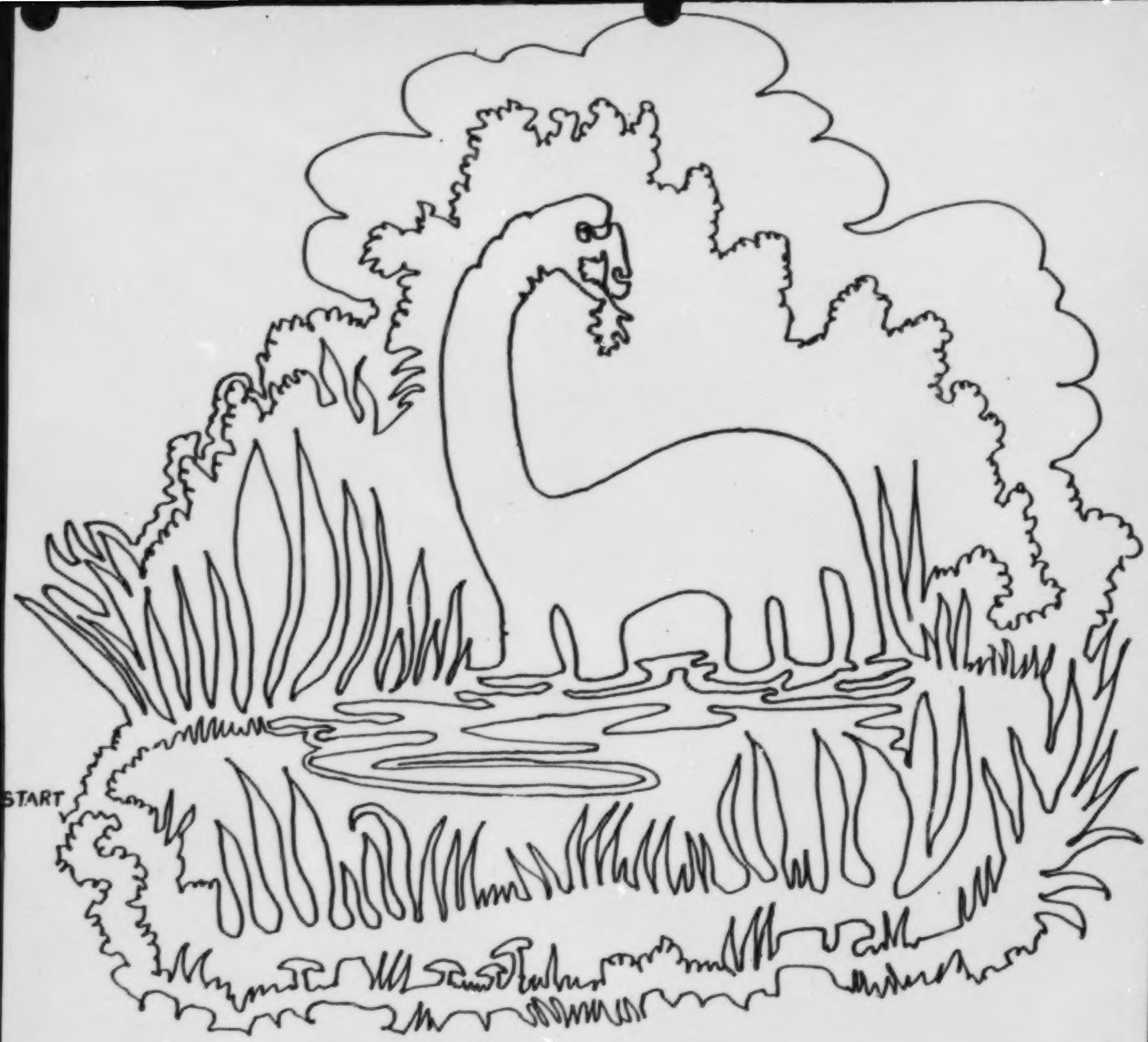
ANIMAL TRACKERS

OBJECTIVES: Strengthen visual tracking and concentration

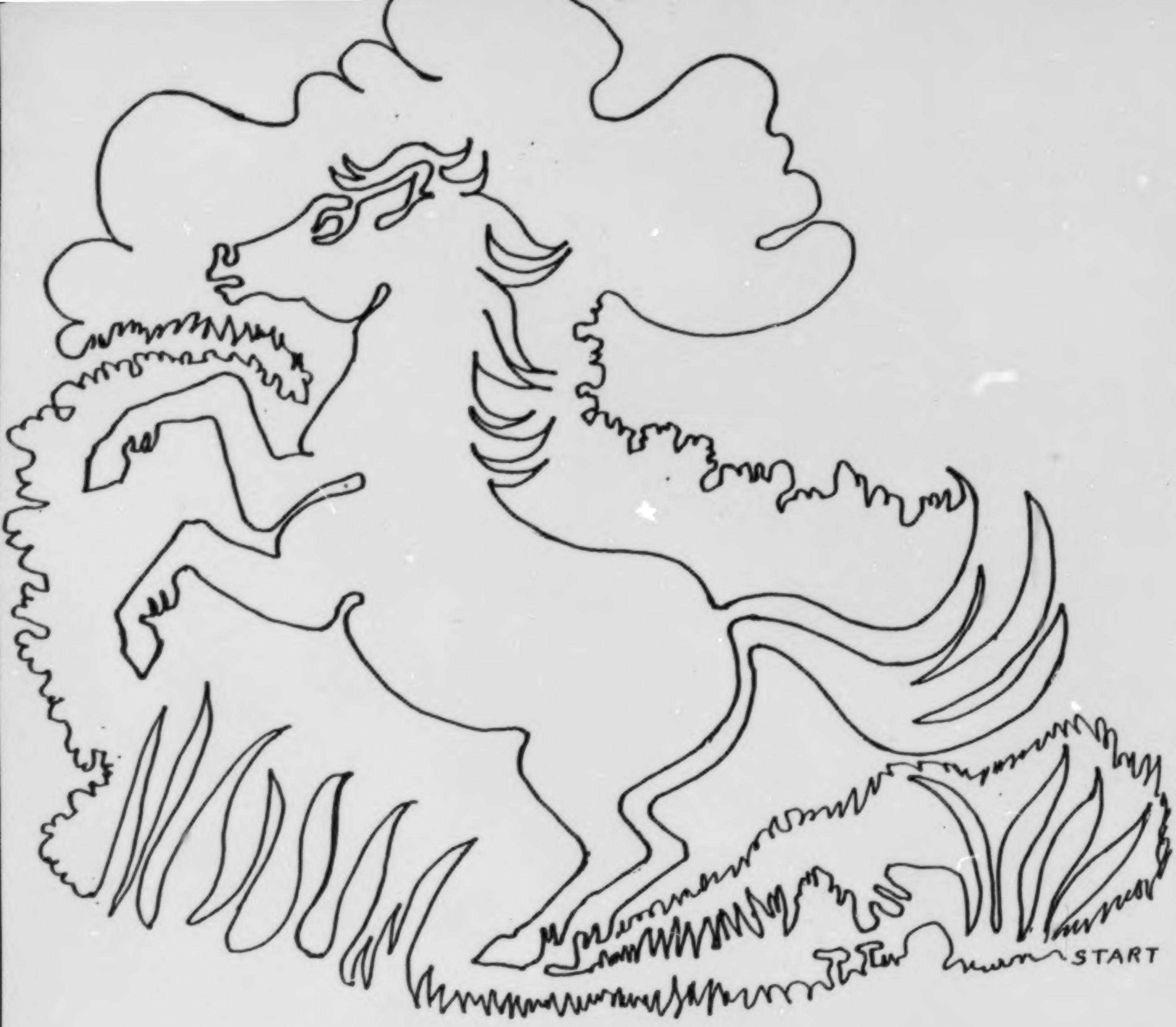
MATERIALS: Tracking Sheets 1 and 2 (included)
pencils
crayons

ACTIVITY:

◑ Students begin at the word start and, without lifting the crayon, trace the line drawing until reaching the end.



Animal Tracking - 1



Animal Tracking - 2

YARN SQUIGGLE

OBJECTIVE: Develop visual imagination

MATERIALS: piece of yarn (at least one foot long)
drawing paper
pencil

ACTIVITY:

◑ Students drop yarn on their desk.

◑ Students decide something it resembles to them (i.e., animal, plant, person, toy, machine, vehicle, cartoon character...).

◑ Students pantomime what it looks like.
Other students guess what it is.

◑ Students draw the squiggle on paper and add further details to make it look like something.

● Students show and tell about their drawing.

SQUIGGLES

OBJECTIVE: Develop visual imagination

MATERIALS: individual chalkboards
chalk
erasers
-or-
blank paper and pencils

ACTIVITY:

◑ Draw a squiggle on each chalkboard or piece of paper.

● Students think of something the squiggle resembles (i.e., animal, plant, person, machine, vehicle, cartoon character...).

● Students complete the drawing, making it look like something.

◐ Students show and tell about their drawings.

FOLLOW-UP:

Students complete the "Squiggle" sheet.(included)

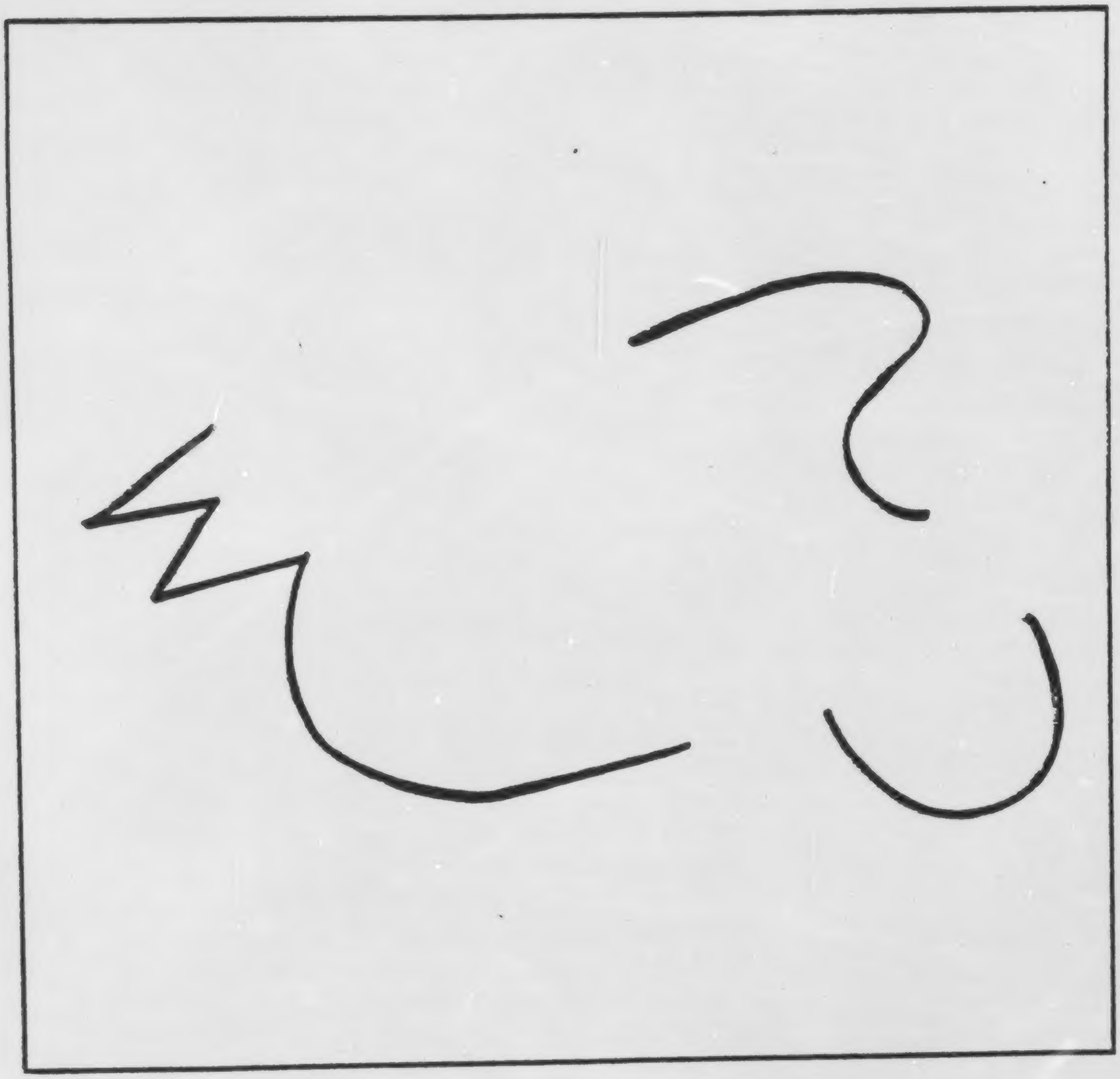
SQUIGGLE

Name: ______________________________

Directions:
1. Look at the squiggle in the box below.
2. What does it make you think of?
   Write it down here:

   ____

3. Finish the drawing by adding lines and color.



4. On another piece of paper write about what you have drawn.

CHALKBOARD - PICTURES

OBJECTIVE: Recognizing pictures representing nouns

MATERIALS:
individual chalkboards
chalk
erasers

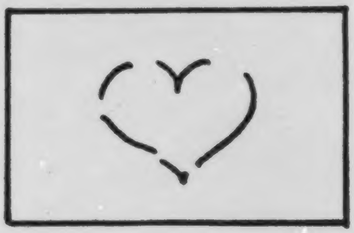
ACTIVITY:

The following are three distinct activities which may be done in any sequence:

● Student draws a picture on the individual chalkboard.
Student shows the picture to the class and tells about the picture.

● Student draws a "secret picture", hiding the board from others' view.
When "Drawing Time" is up, "Guessing Time" begins.
Student gives other students a chance to guess the picture.

◐ Student draws another "secret picture". This time the student makes up to five erasures on the picture.
Students attempt to guess the picture.



WHAT IS IT?

OBJECTIVES: Free association using visual-spatial shapes
Expression of imagery through art

MATERIALS: scissors
tagboard
cardboard
pencils
shapes patterns (2 sheets)

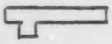
PREPARATION:

Using the shapes patterns, cut out enough copies of each shape for all students.

ACTIVITY:

◑ Give each student one of the shapes cut out of tag or cardboard.

◑ Allow them to do anything they want with the shape (within reason).

◐ Observe how students use their imagination in handling the shape. (i.e., students might move this shape  as a "gun", a "boat", a...)

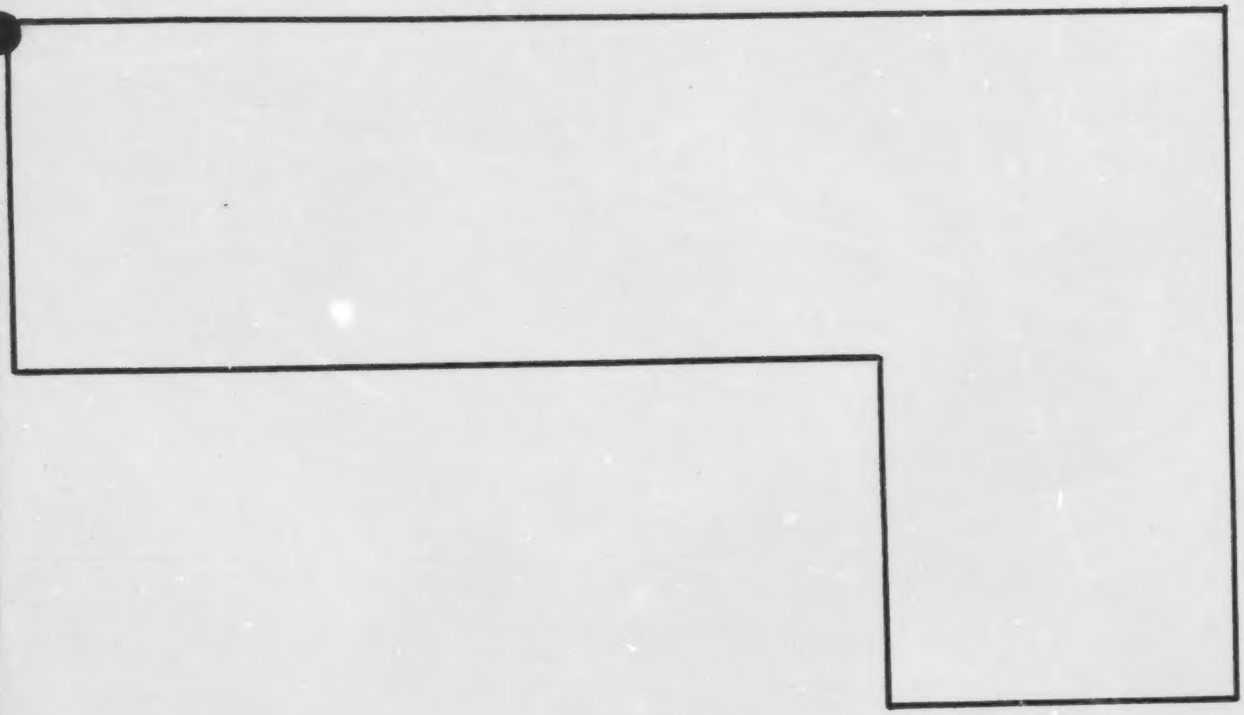
◐ Students write a story on their shape about how they used it. (They may want to use the first person - singular form: "I am a gun used by Davey Crockett...")

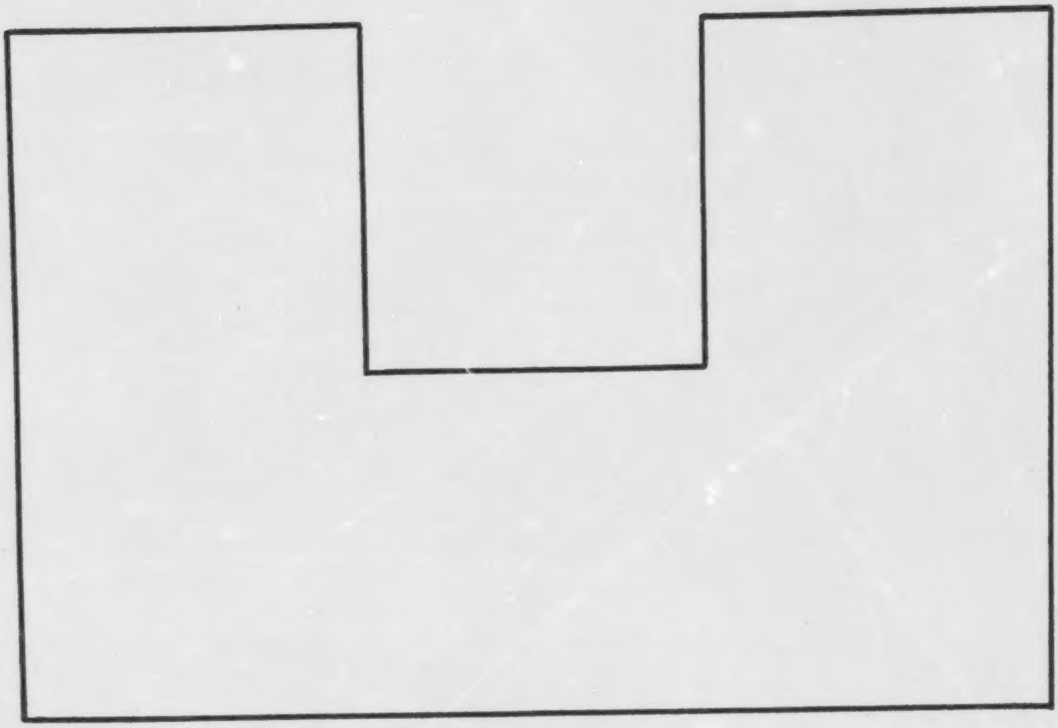
◐ Students discuss what they did with their shape.

◑ Students use the shape as the basis of a drawing or design.

WHAT IS IT?

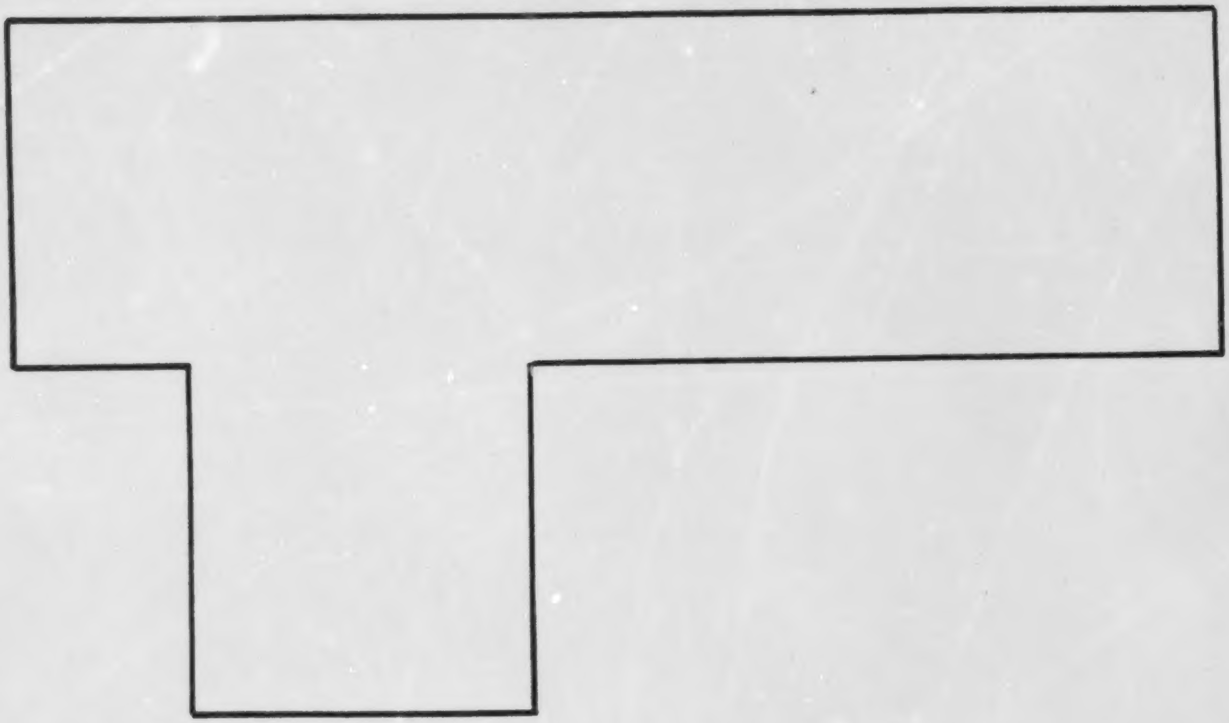
SHAPES PATTERNS

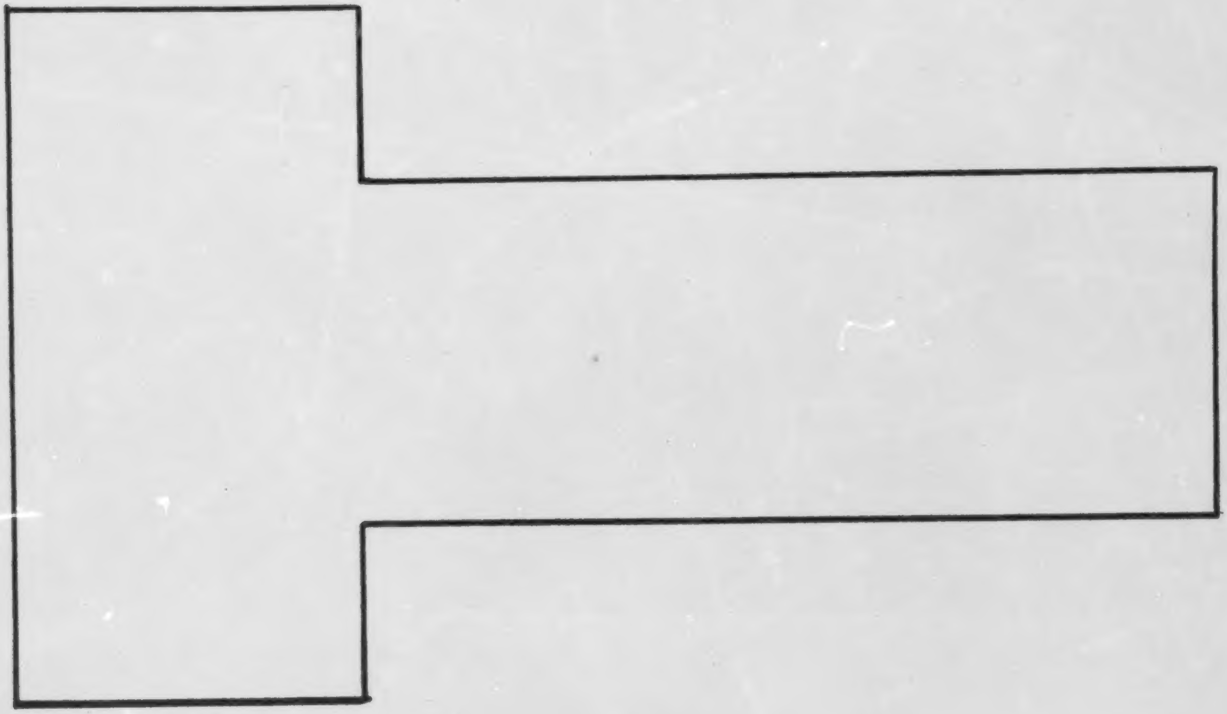




WHAT IS IT?

SHAPES PATTERNS





NAME DROPPING

OBJECTIVE: Develop visual imagination

MATERIALS: a chair

ACTIVITY: Place a chair so it is visible to all students. Explain that a game is going to be played called "Invisible People". An "invisible person" will be "sitting" in the chair and introduced by the teacher using names only.

- Students visualize what they think the person would look like if that person were visible.

- Students draw a quick sketch of the person or tell about what the person looks like or likes to do. Older students can write a paragraph or story about the person.

The following is a starter list of names to use (or students can make up names of their own):

Chip Woods
Brock Brady
Leroy Hornbecker
Mary Contrary
Webster Whitewash
Rock Bottom
Dawn Acres
Apple Crisp
Goldie Silvers

Johnny Jitters
Tom Strongbody
Crash Careless
Horton B. Fesselmyer the Third
Phineas Q. Barnskiddel
Wally Whisper
Sally Silly Giggle
Melody Sweetsong
Honey Butter

Here's a sample discussion:

> "Students, I'd like you to meet a new student to our class. This is Chip Woods.
>
> Now, let's hear what you think he looks like and likes to do?
>
> Now draw a picture of what you think he looks like."

POPCORN

OBJECTIVE: Develop visual imagery and verbal expression

MATERIALS: none

ACTIVITY:

◑Lead students in the following guided imagery:

Pretend you are a popcorn kernel living in a jar sitting on a grocery store shelf.

One day a lady comes along and takes you home.

She puts you on a shelf in a dark cupboard.

You sit and sit there—all of a sudden you see a light, up you go—jiggle, jiggle—upside down you go tumbling after other kernels into the popper. You sit there for a moment and then it starts to get warm and then hot and then...

●Students tell about what happens next.

●Students draw a picture of what happens next and discuss pictures.

●Students write about an experience related to popcorn.

◐Students discuss what they have written.

POPCORN - MIND CHANGES

OBJECTIVE: Develop multi-sensory awareness and imagery

MATERIALS: popcorn, popper, napkins
lined and unlined paper
pencils

ACTIVITY:

- Distribute popped popcorn to each student on a napkin
- Have students pick up a piece of popcorn and:
    - smell it
    - feel its texture
    - imagine it is as big as a cloud
    - imagine it is as small as an ant
    - imagine it changes its color several times
    - imagine it changed back into an unpopped kernel
    - imagine it has wings with which to fly
    - imagine it has turned into a person's face, listen to what it is saying
    - make it disappear by eating it
- Students draw or write about one of the changes they made in their mind to the piece of popcorn.

VARIATION:

Allow students to think of new "mind changes" to do with their piece of popcorn.

TREE BREEZE

OBJECTIVE: Express images of trees through movement, drawing, talking, and writing.

MATERIALS: None

ACTIVITY:

◐ Look out the classroom window. Find a tall tree. Pretend you are that tree. Your arms will be the branches. Your body is the strong trunk, and your feet are the roots that go deep into the ground.

Imagine that a wind is blowing you from side to side.

● Have students stand up and spread out. It is best to do this activity outside. Each student chooses a favorite tree, looks at the tree carefully, and pantomimes the tree. Other students try to guess the tree.

◐ A student is chosen to move like a tree swaying in the wind. Other students "mirror" the movements. Tap a rhythm. With each tap, students change movements.

Move like:

a tree blowing in a light breeze/a strong wind

a lightning storm

a young tree/an old tree

a tall tree/a short tree

a tree with no leaves

a tree losing leaves

◐ Students pantomime something that is made from wood. (i.e. violin, house, etc.)

Draw a picture; discuss the picture; write about the picture.

◐ Sit under a tree. They draw the tree—looking up through its branches.

◐ Students imagine they are birds flying over the tree. Draw what the tree would look like.

◐ Students imagine they are birds sitting on branches in the middle of the tree. Draw what the tree would look like.

COLOR VISUALIZATION

OBJECTIVE: Expressing images through art, writing, and discussion

MATERIALS: 6" x 9" pieces of construction paper
unlined paper
pencils
crayons

ACTIVITY:

◑ Hold up two colors of construction paper.
Use color combinations that do not have stereotyped connotations, i.e., combinations such as red and green, which might automatically be equated with Christmas should be avoided. Ask students: "What do you think of when you see this combination of colors."

◐ Students discuss their first impressions. Try to get students to combine the colors into one thing, not two separate items. (i.e., blue + white = ocean waves, not sky and clouds)

● Repeat this procedure for other color combinations.

◑ Students draw their favorite visualization using two colors of crayons.

◑ Students choose two construction paper colors and express their visualization in a work of art.

◐ Students write about their favorite color combination.

SHAPELY SILHOUETTES

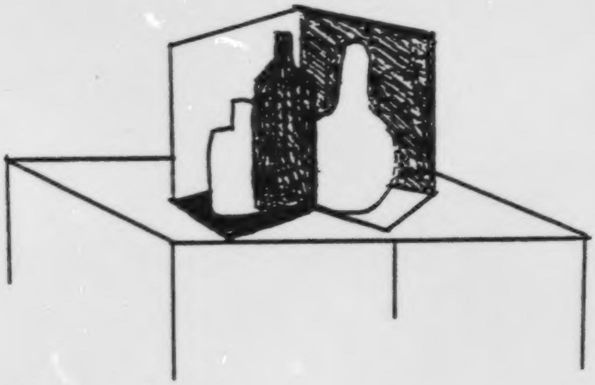
OBJECTIVE: Develop ability to process visual-spatial information

MATERIALS:
- black and white acrylic paint
- paint brushes
- empty jars and bottles of various shapes and sizes
- black and white construction paper, butcher paper, or cardboard
- pencils or black crayons
- white drawing paper

PREPARATION:

Bottles and jars are painted either black or white.

A black and white paper background is set up on a table such as the one below. Bottles are arranged for the maximum black and white contrast.



ACTIVITY:

◐ Students draw the background and the outlines of each bottle. The black areas are shaded.

COME TO YOUR SENSES - 1

OBJECTIVE: Associate language and tactile awareness

MATERIALS: box with bags containing objects of varied textures

ACTIVITY:

●Without looking inside, open a bag.
Feel what is inside.
Close the bag.
Put it back in the box.
How did it feel?
What could it be?

◑Draw a picture of what you touched.

-or-

◐Write about what you touched.

-or-

◐Write about how you felt when you touched the object.

◐List at least four words to describe the object.

COME TO YOUR SENSES - 2

OBJECTIVE: Associate language and tactile awareness

MATERIALS:
blindfolds for each student
pencil
paper
crayons

ACTIVITY:

◑ Blindfolded students form a "train", holding hands around the room.

● Students travel around room feeling and naming objects (blackboard, pencil sharpener, easel, window, chair, desk).

◑ When students are back at their desks, they feel objects inside their desks.

◑ Teacher names objects in the room one at a time. Students imagine what they felt like.

◐ Students discuss what various objects felt like.

● Students draw and/or write about one or several objects.

COME TO YOUR SENSES - 3

OBJECTIVE: Associate language and tactile awareness

MATERIALS: pictures/slides of common things (dogs, ball, frisbee)

ACTIVITY:

◑Show picture to students for about one minute

◑Ask the students to close their eyes and "feel" the object as if they were holding it.

◐Students discuss feelings about the object.

Repeat the procedure with other pictures.

●Looking at all the pictures, students choose their favorite picture, draw and/or write about it.

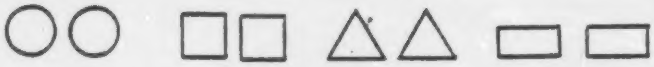
●Students share pictures and/or writing with the class.

●Feel an object at home. Draw and/or write about how it feels to hold it.

COME TO YOUR SENSES - 4

OBJECTIVE: Associate language and tactile awareness

MATERIALS: four pairs of geometric shapes for each child



blindfolds
pencils
paper

ACTIVITY:

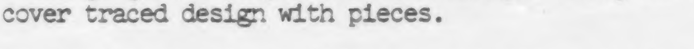
◑Blindfolded students match the pairs of shapes in their set.

◐Students take off blindfolds and check their results.

●Repeat the procedure several times blindfolded.

Variation:

Use three pairs of matched shapes and one pair of unmatched shapes.



Increase/decrease the number of shapes and amounts of each shape.

Students arrange, trace, and color shapes on paper to make a design.

Exchange geometric pictures and designs among students. Students cover traced design with pieces.

Students classify three-dimensional geometric shapes using objects as cans, boxes, etc.

LISTENING

OBJECTIVES: Develop auditory attention
Develop visual imagery

MATERIALS: pencils
paper

ACTIVITY:

This activity is best done at a time when there are not many students on the playground.

◐ Have students close their eyes and listen for about five minutes.

● Discuss all the things the students heard. Many of the following can often be heard:

- birds
- bells
- sirens
- cars and trucks
- motorcycles
- airplanes
- buzzing insects
- buzzing lights
- people talking
- people walking
- doors closing
- thunder
- barking dogs
- rain
- wind

If there does not seem to be many of these more typical sounds that usually occur, it is sometimes helpful to provide a few additional sounds such as paper tearing, writing on the chalkboard, dropping a book, knocking, clapping, etc.

● Have students describe the things they heard in terms of the sounds and the visual images that developed.

◐ Have students draw pictures of the things they heard.

● Have students write about the things they heard.

SNIFF AND TELL

OBJECTIVES: Associate language and sense of smell
Develop visual imagery

MATERIALS: at least six containers
at least six substances with distinct aromas
possible substances are:

1. spices: cinnamon, cloves, etc.
2. herbs: garlic, oregano, etc.
3. flower petals
4. fruit: lemon, banana, peach
5. chocolate
6. coffee
7. leather
8. woods: cedar, pine, etc.
9. extracts: vanilla, peppermint
10. wintergreen, spearmint

PREPARATION:

Make a hole or several small holes in the tops of the containers. Non-transparent containers are best. Transparent containers should be covered with paper or masking tape. Fill each container with one of the substances.

ACTIVITY:

◑ Have each student smell a substance and pass it to the next student. As a student smells a substance, have the student visualize something associated with the aroma, i.e., cinnamon might stimulate an image of baking pastries in a kitchen; leather might stimulate an image of a new pair of shoes; lemon might stimulate an image of lemonade or a lemon tree, etc.

◐ After the students have had an opportunity to smell a variety of substances, discuss the odors and the images that were generated.

● Have the students draw pictures of the images they enjoyed most and discuss the pictures.

CUBE CONFIGURATION

OBJECTIVE: Develop visual spatial processing

MATERIALS: set of Cube Configuration Cards (23 sheets included)
colored cubes (wooden or plastic)
crayons
paper cutter
stapler

PREPARATION:

This lesson includes 23 Cube Configuration Sheets. The configurations range in difficulty from one cube to nine cubes.

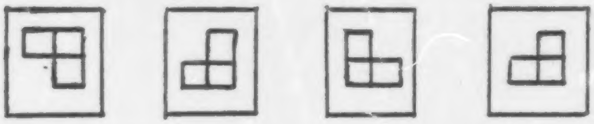
They are designed to be duplicated, cut in half, and distributed. Students complete sheets appropriate to their ability level.

Here are some suggested uses:

◐ Students look at the configuration and reproduce it using blocks.

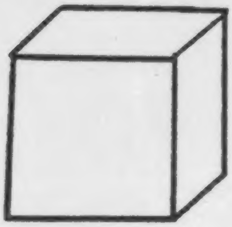
◐ Students color the configuration on the sheet to match the colored cubes they used.

◐ Some configuration sheets may be rotated four times. Students rotate their cube configuration to match.



A series of sheets may be stapled together to form a booklet. Other students may use blocks to reproduce the colored configurations in the booklets.

CUBE CONFIGURATIONS



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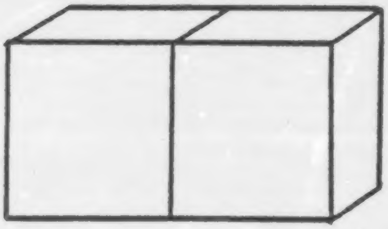

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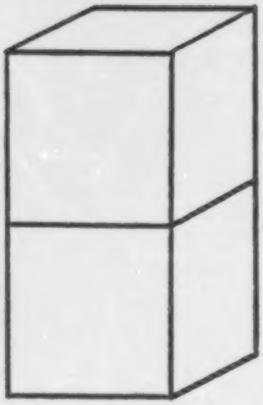

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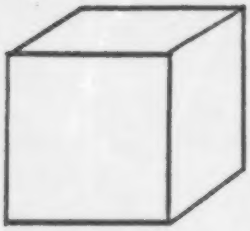

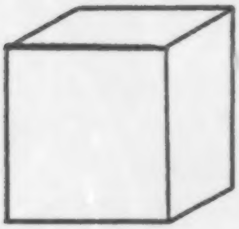

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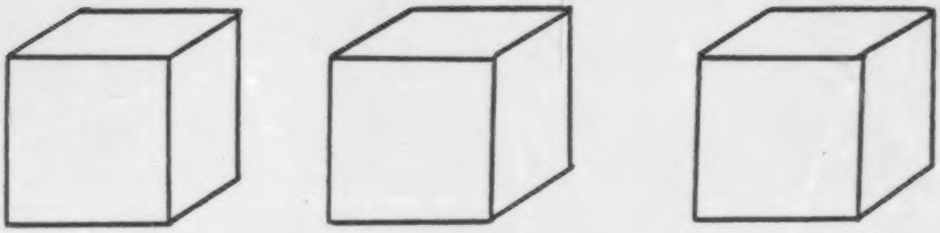

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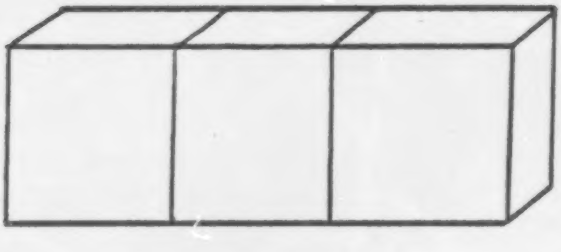

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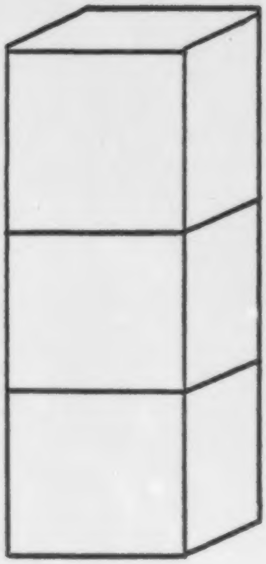

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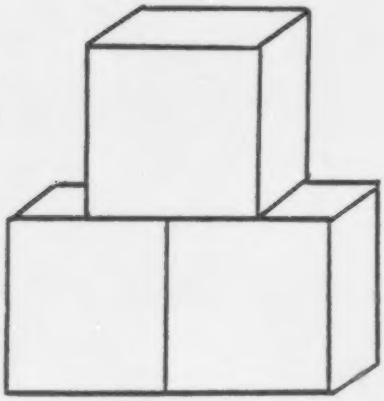

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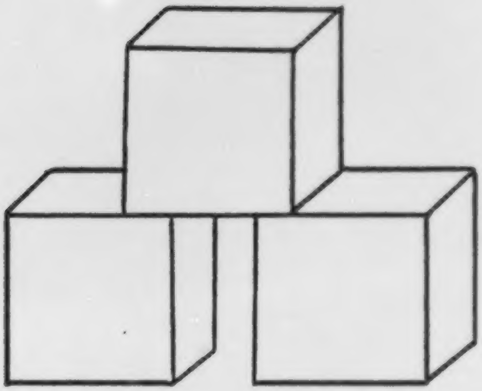

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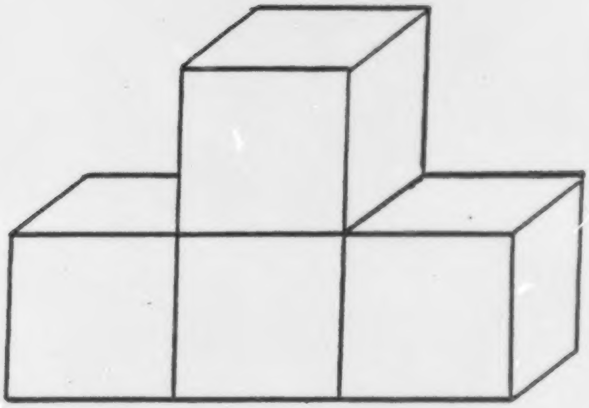

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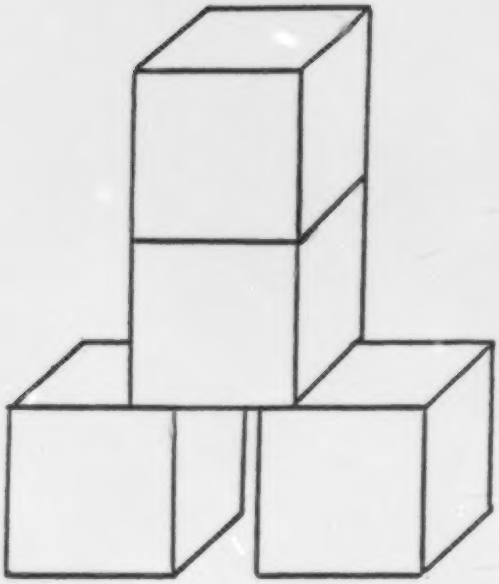

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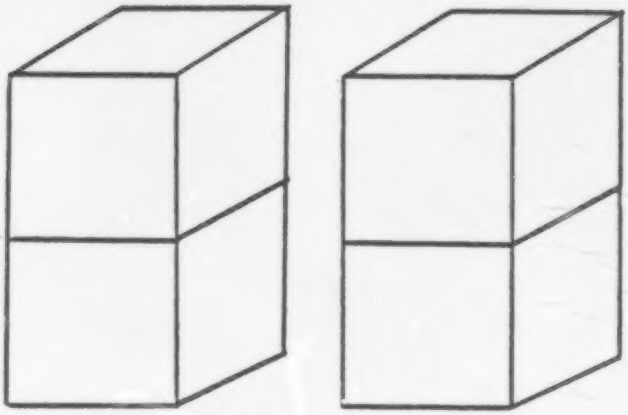

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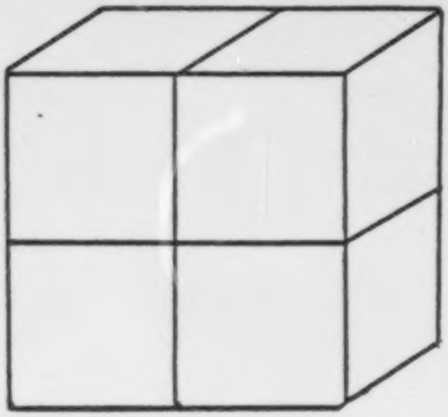

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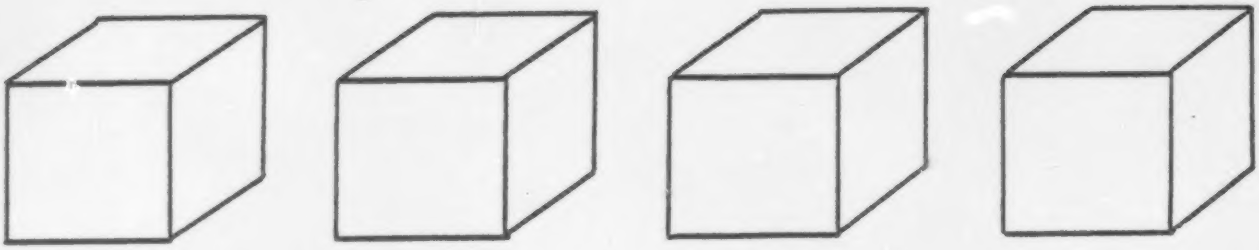

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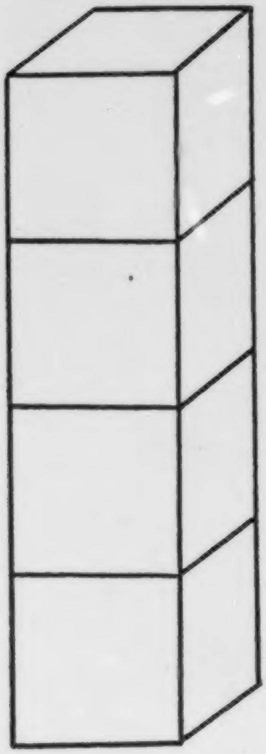

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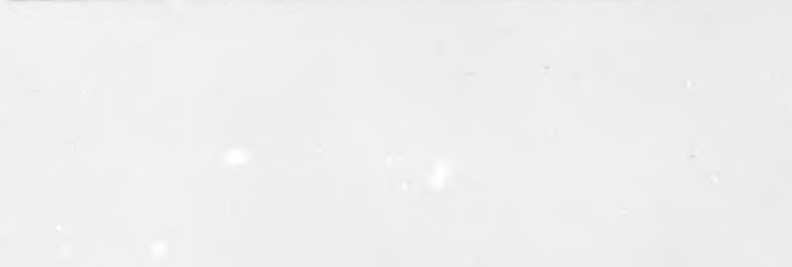

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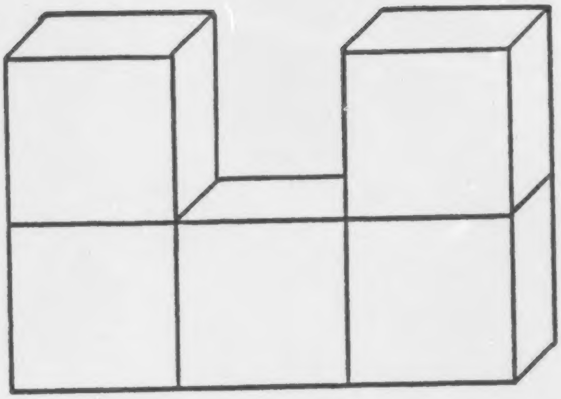

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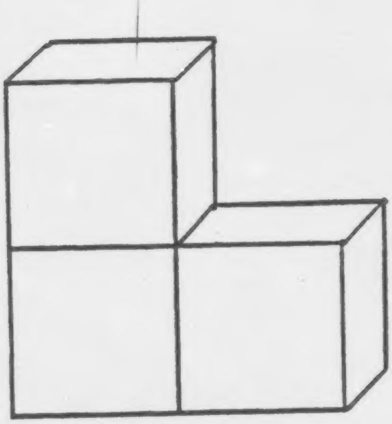

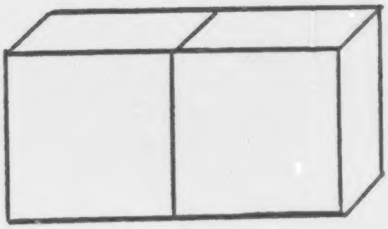

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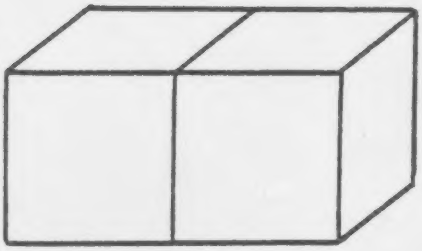

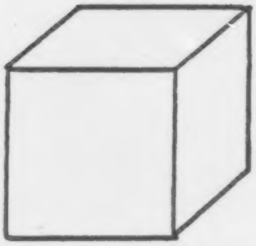

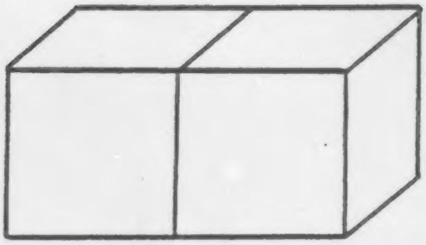

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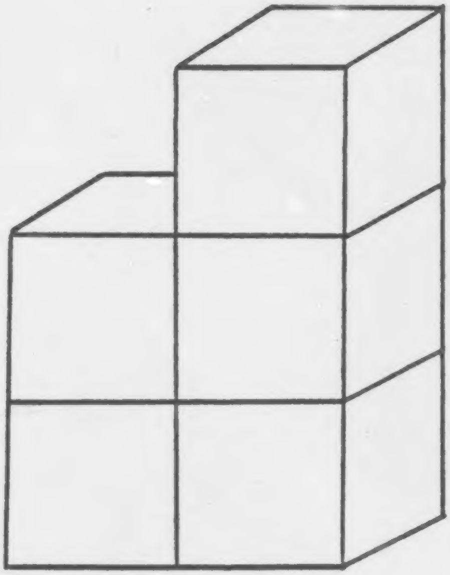

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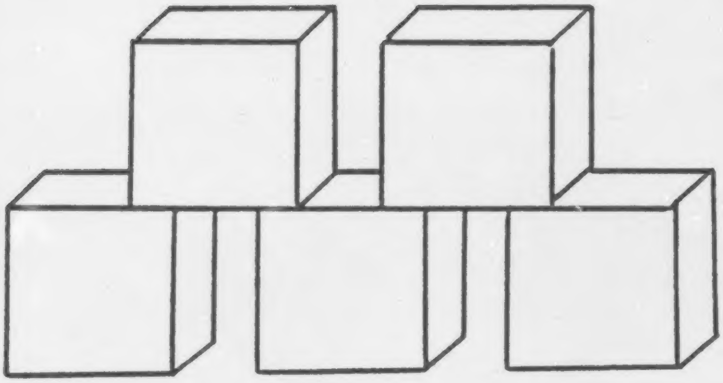

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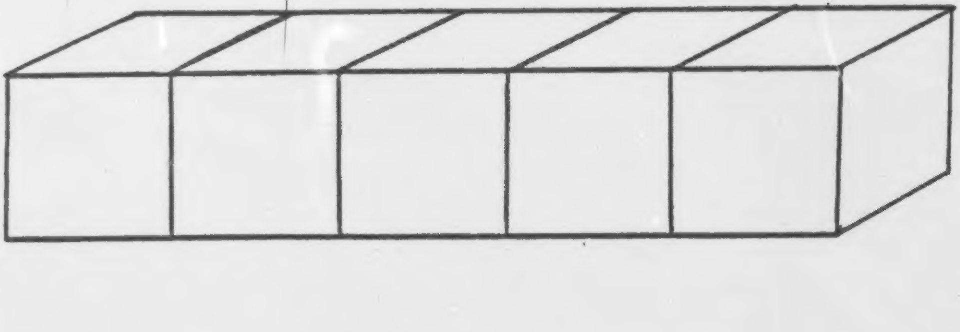

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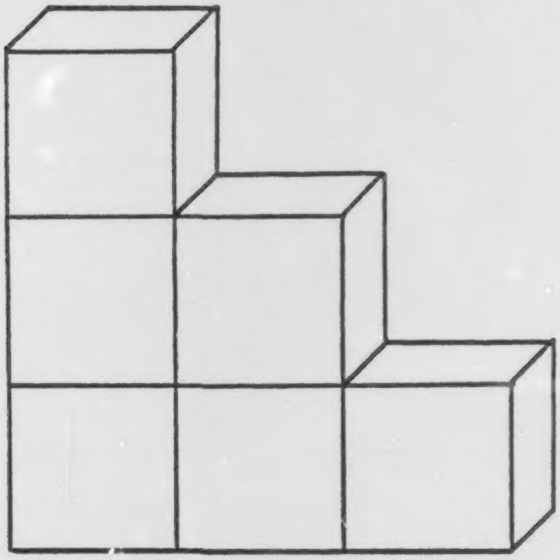

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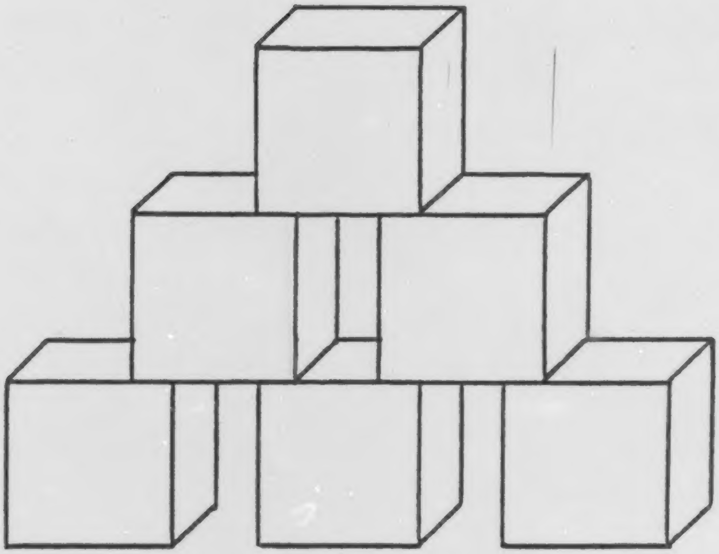

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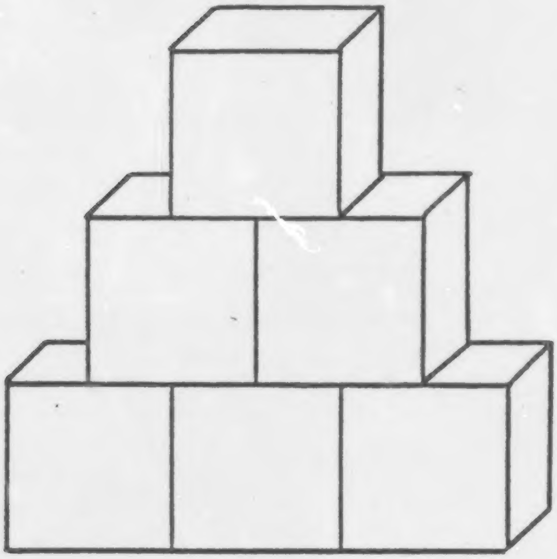

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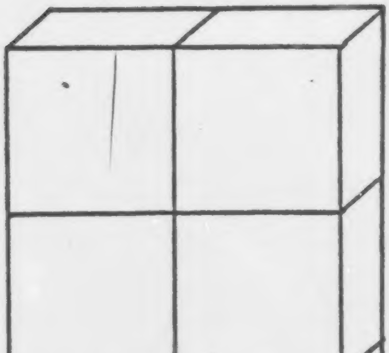

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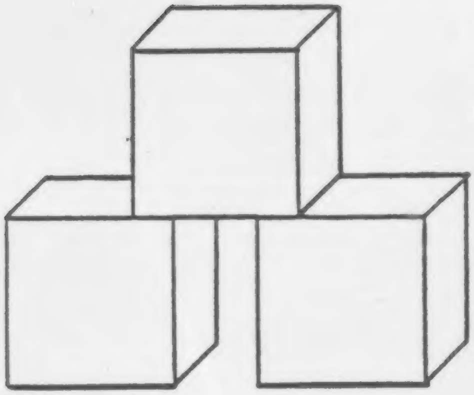

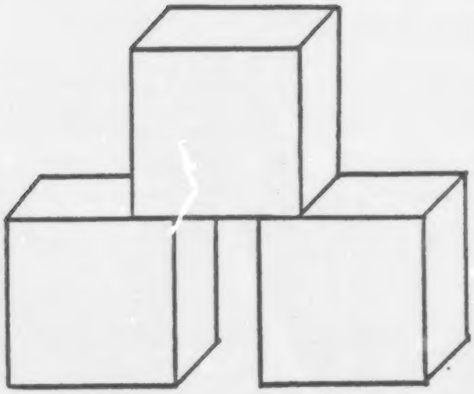

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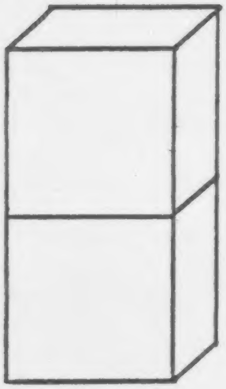

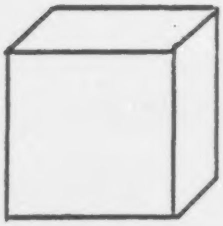

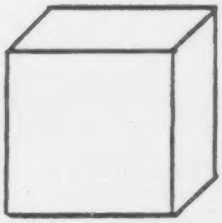

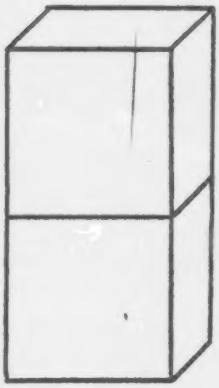

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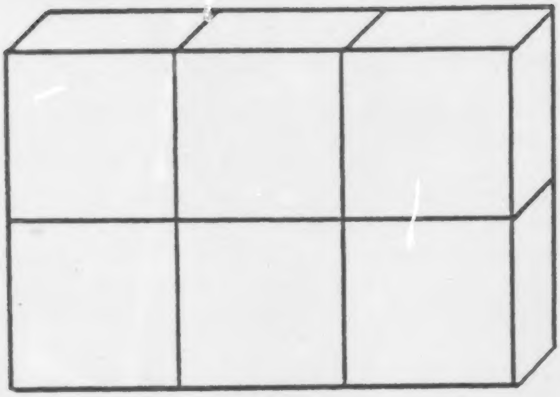

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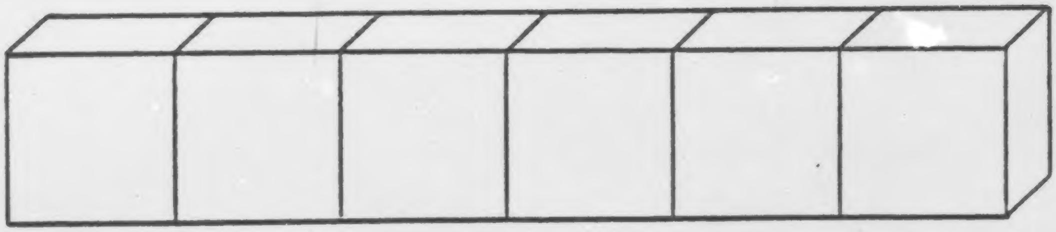

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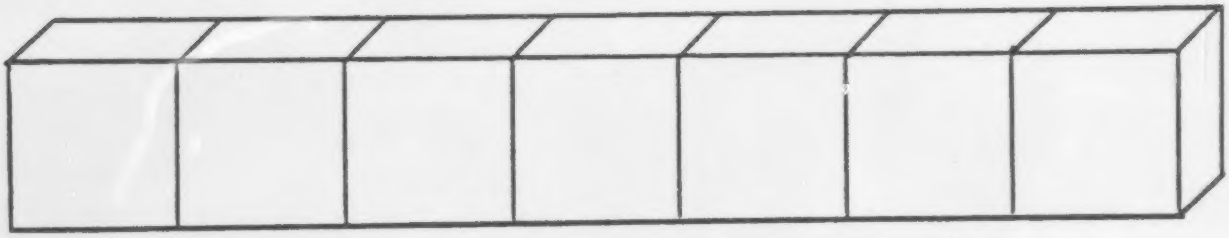

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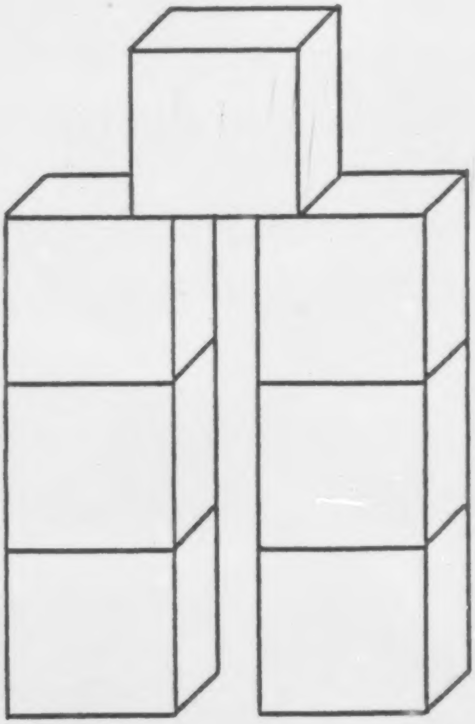

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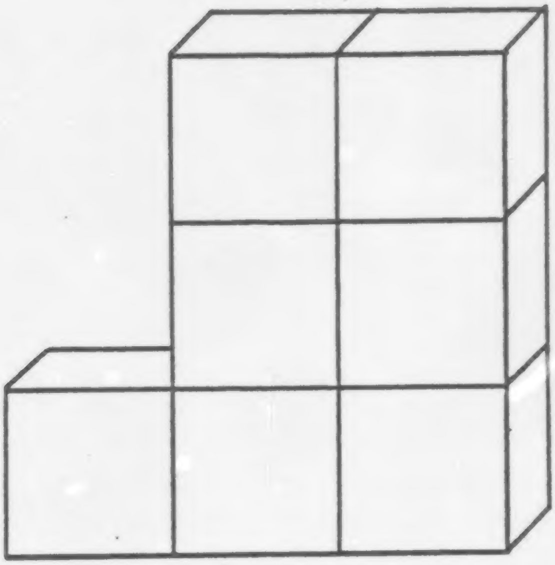

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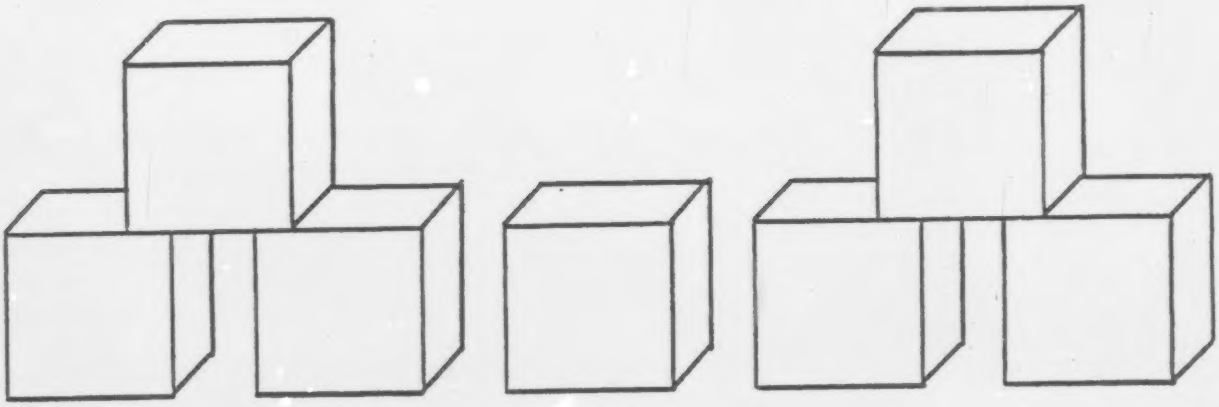

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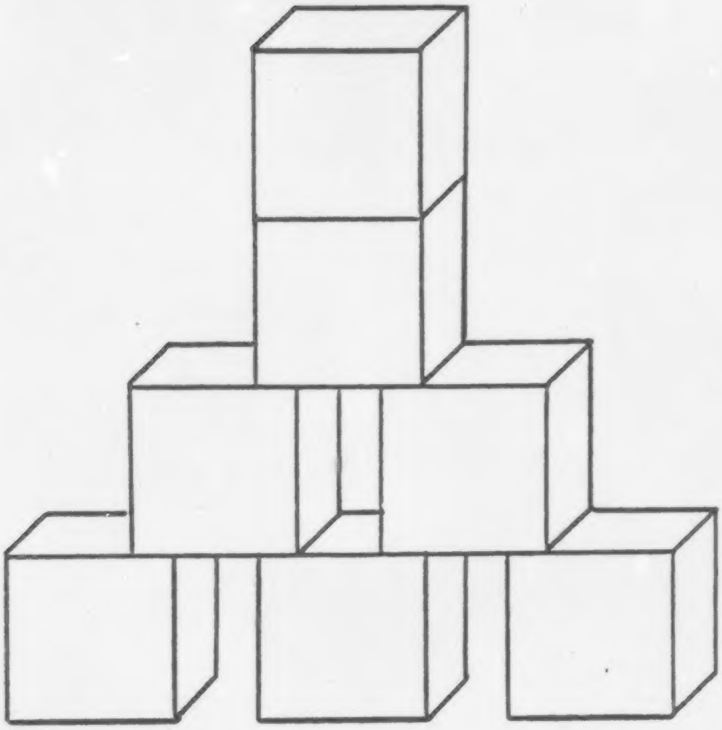

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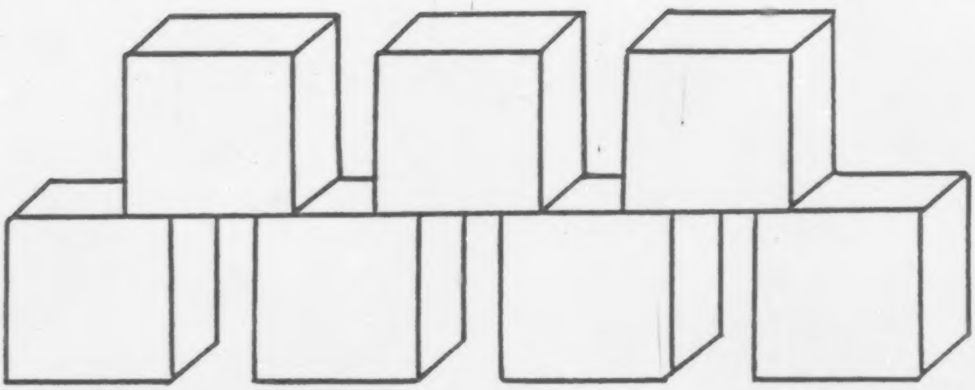

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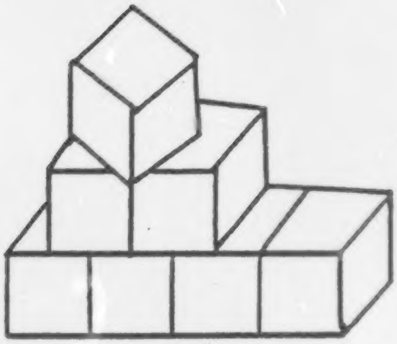

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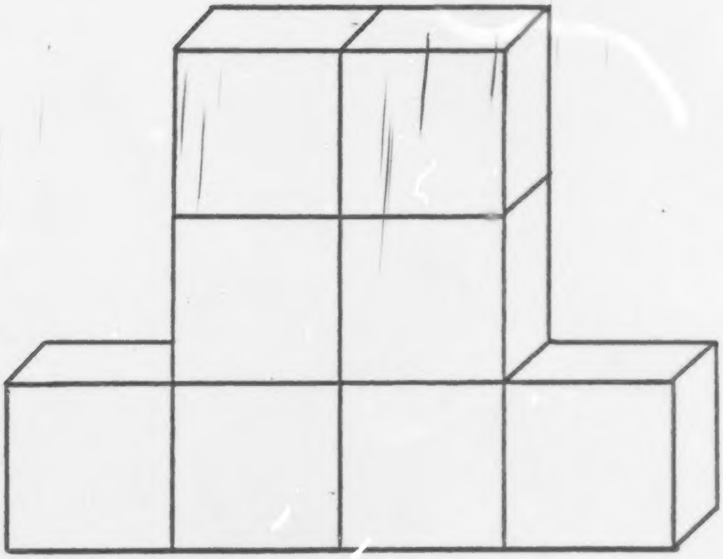

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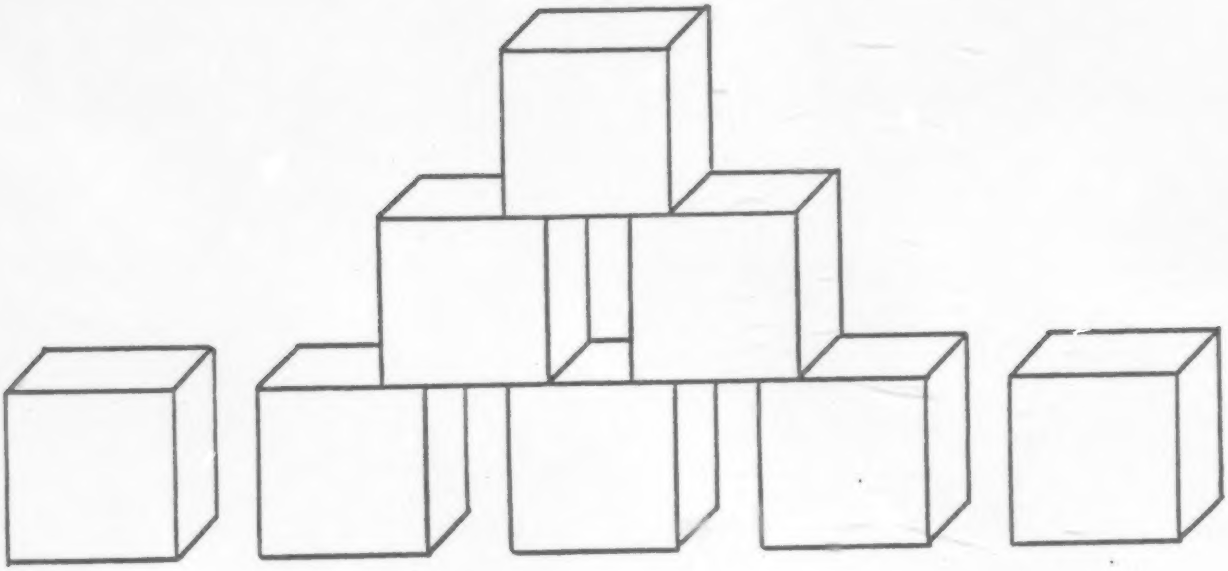

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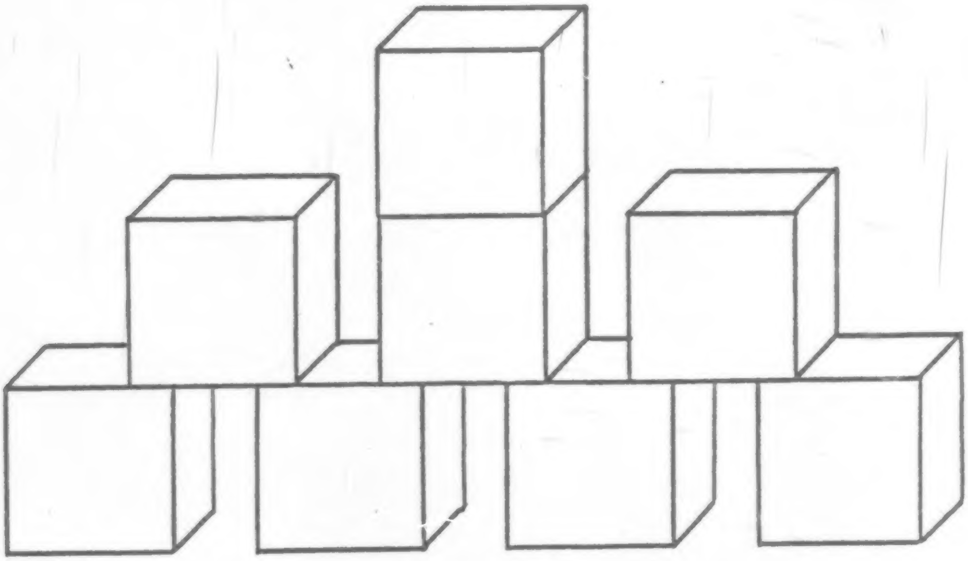

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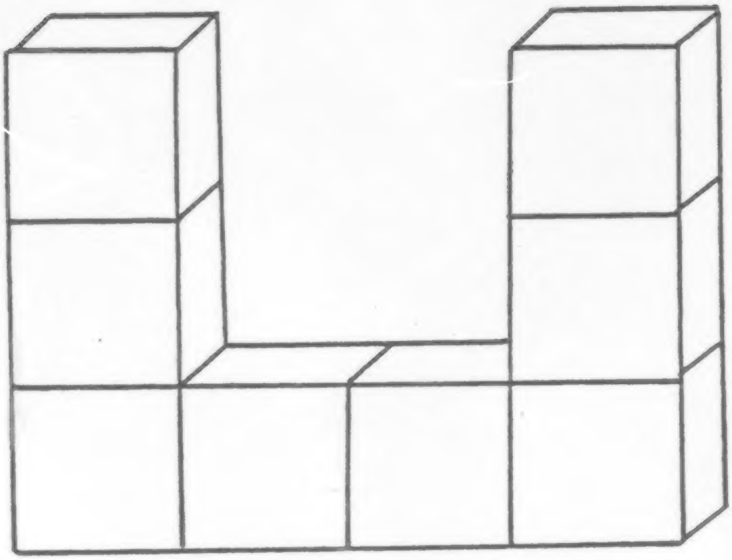

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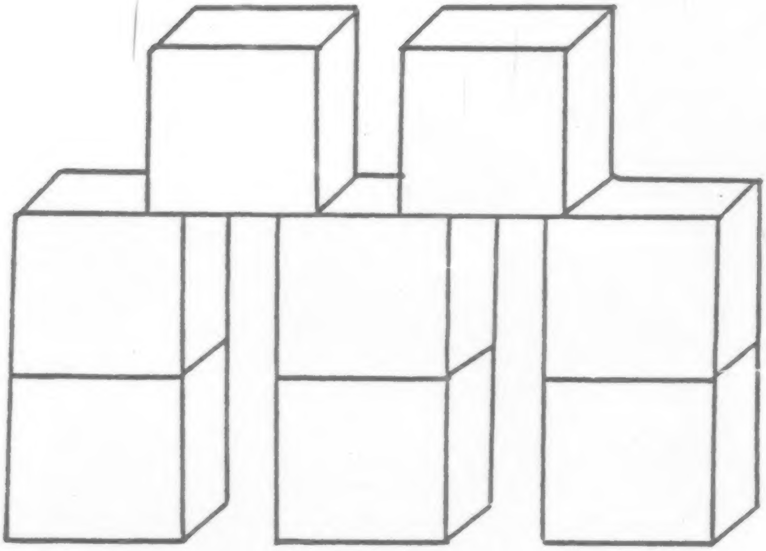

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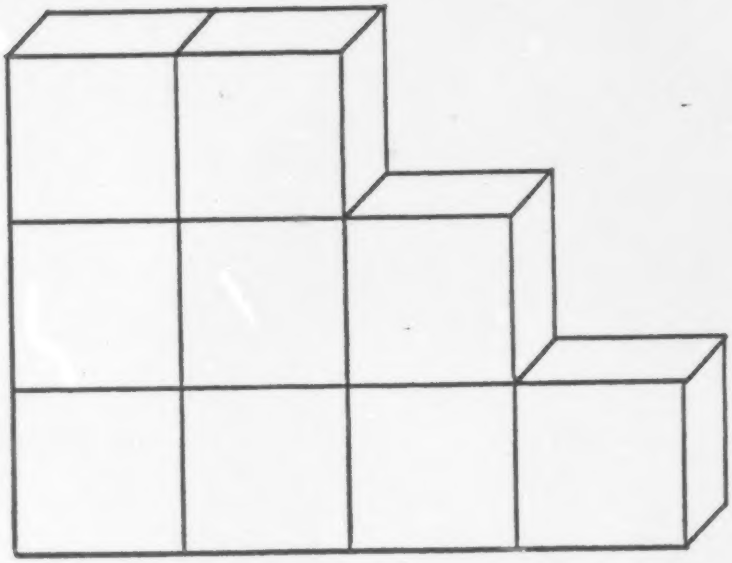

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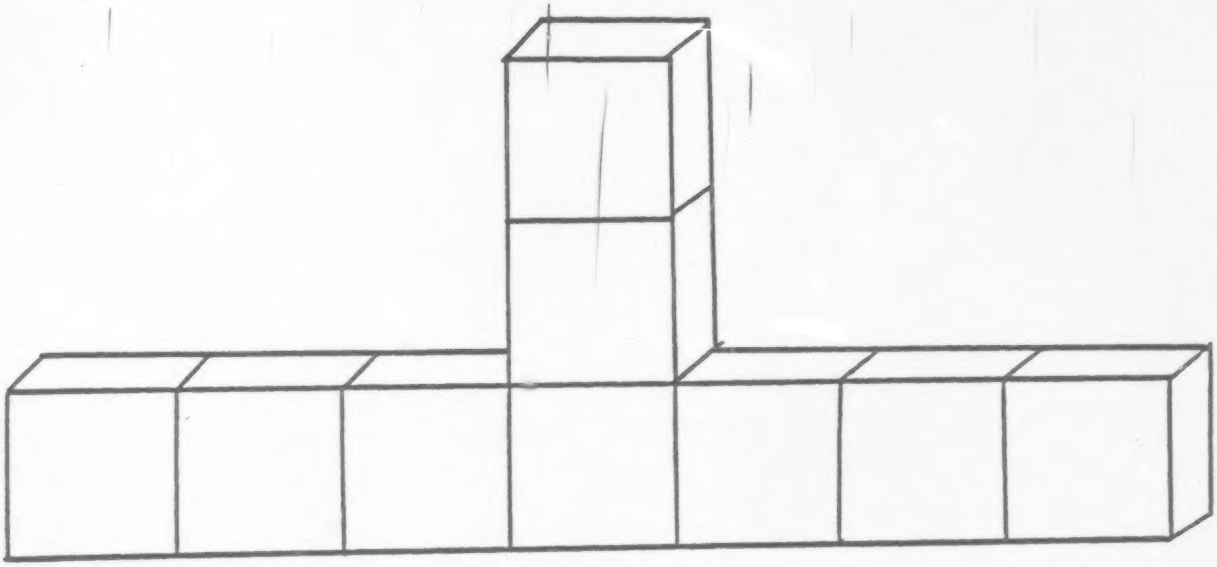

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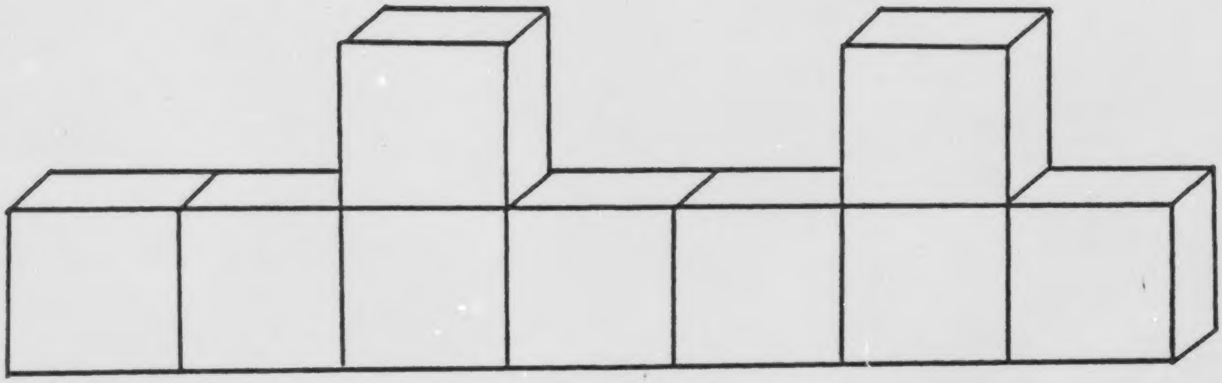

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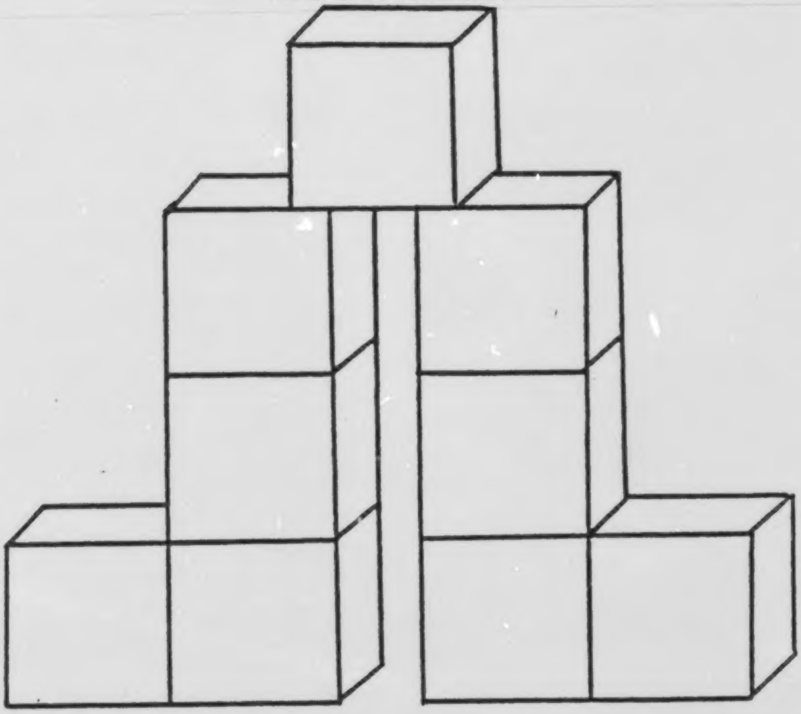


MAKE ME!

OBJECTIVE: Develop visual spatial processing

MATERIALS: set of "Make Me!" worksheets (8 included)
8 1/2" x 11" unlined paper
scissors
paste

ACTIVITY:

This activity consists of two sets of worksheets. Each worksheet contains geometric shapes to be cut and pasted creating the pictures of an animal.

● In the first four worksheets, students are given only the animal's name (i.e., pig, bird...). They arrange the pieces from the worksheet to resemble the animal. These worksheets lend themselves to creativity and visualization.

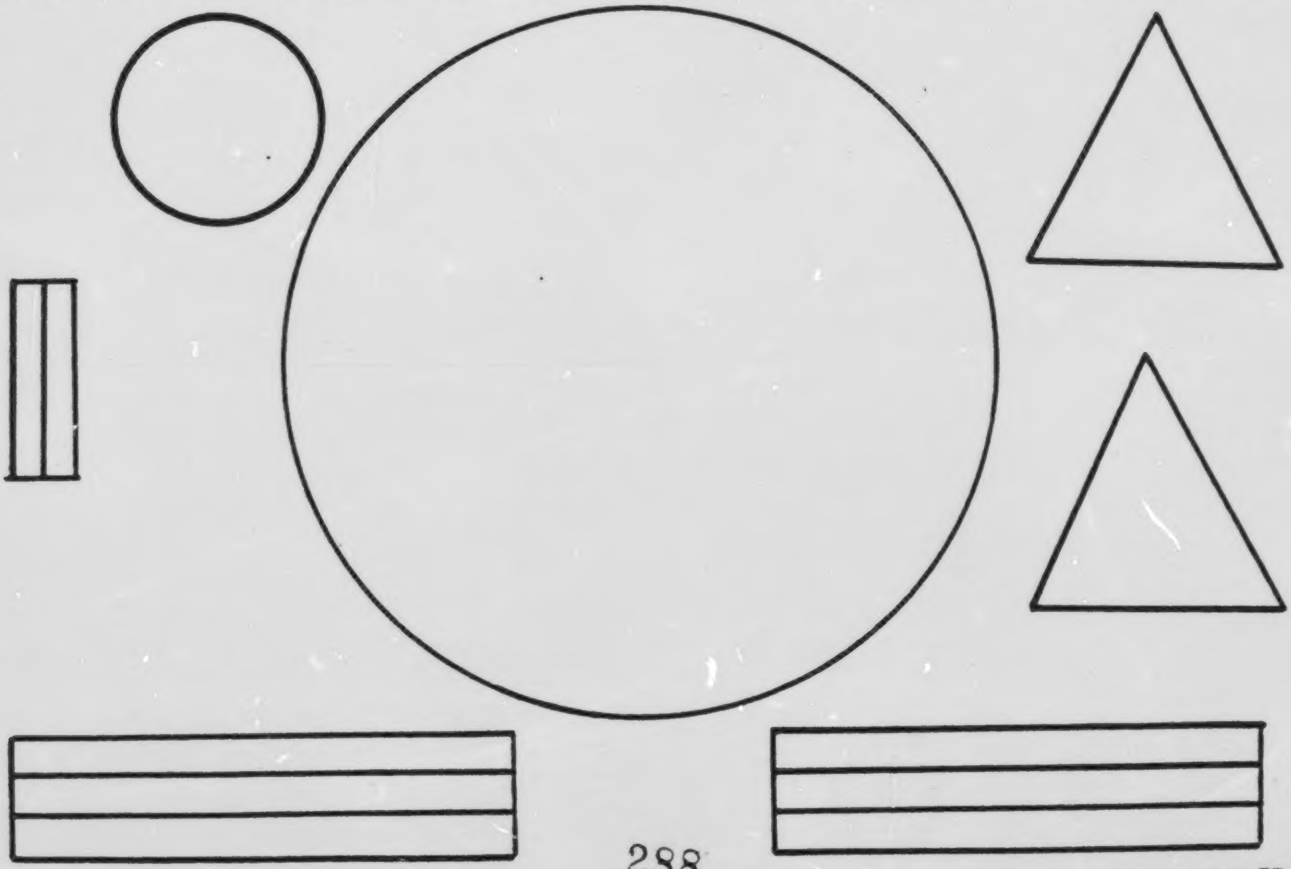
◐ On the second four worksheets, students are given a picture of the animal. They must then arrange the pieces to resemble the animal's picture. These worksheets are designed to promote accuracy and visual discrimination.

KITTY CAT

DIRECTIONS:

1. Cut these pieces out.
2. Paste them on another piece of paper to make a:

cat



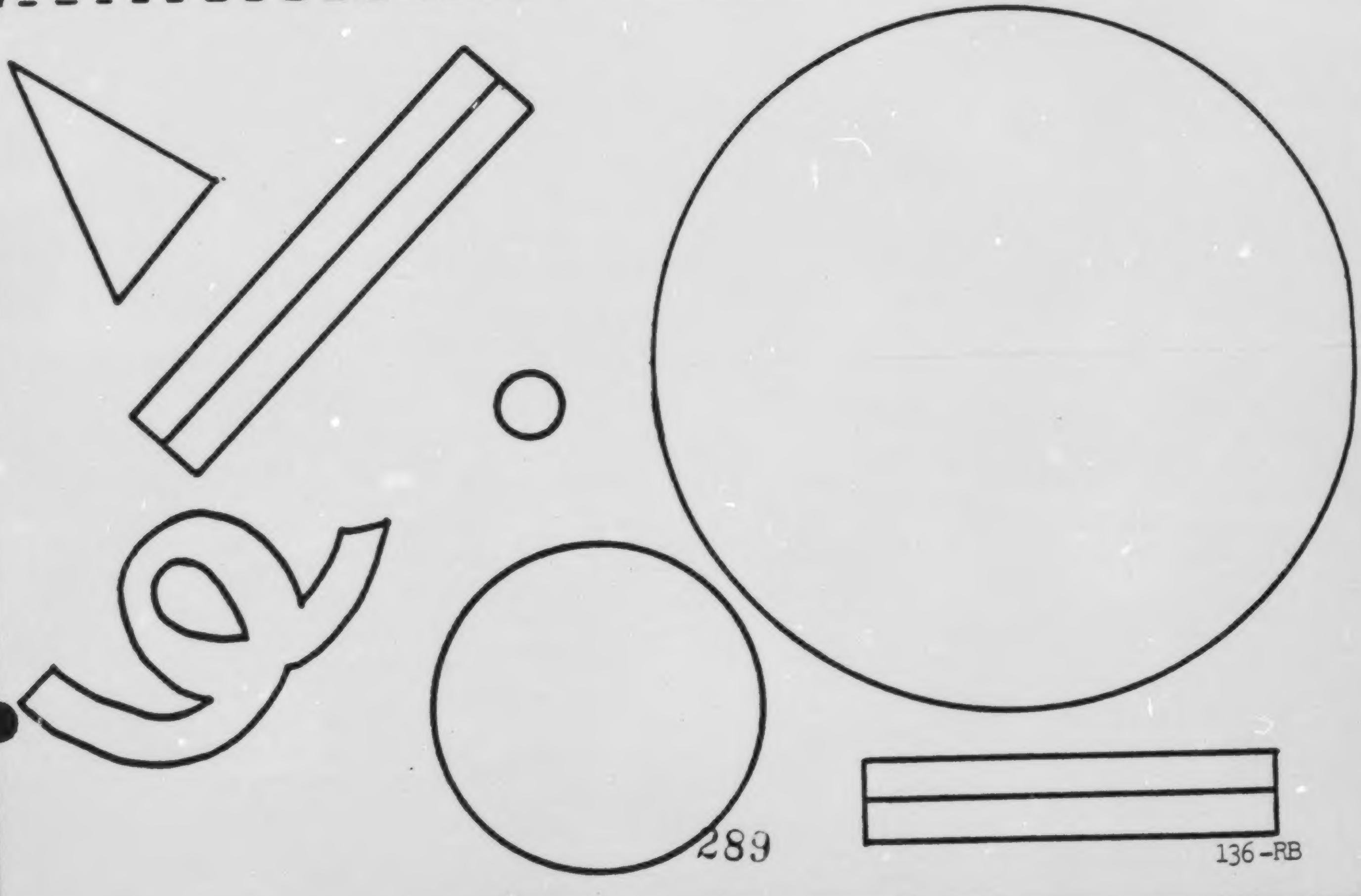
MAKE ME!

PIGGLY WIGGLY

DIRECTIONS:

1. Cut these pieces out.
2. Paste them on another piece of paper to make a:

pig



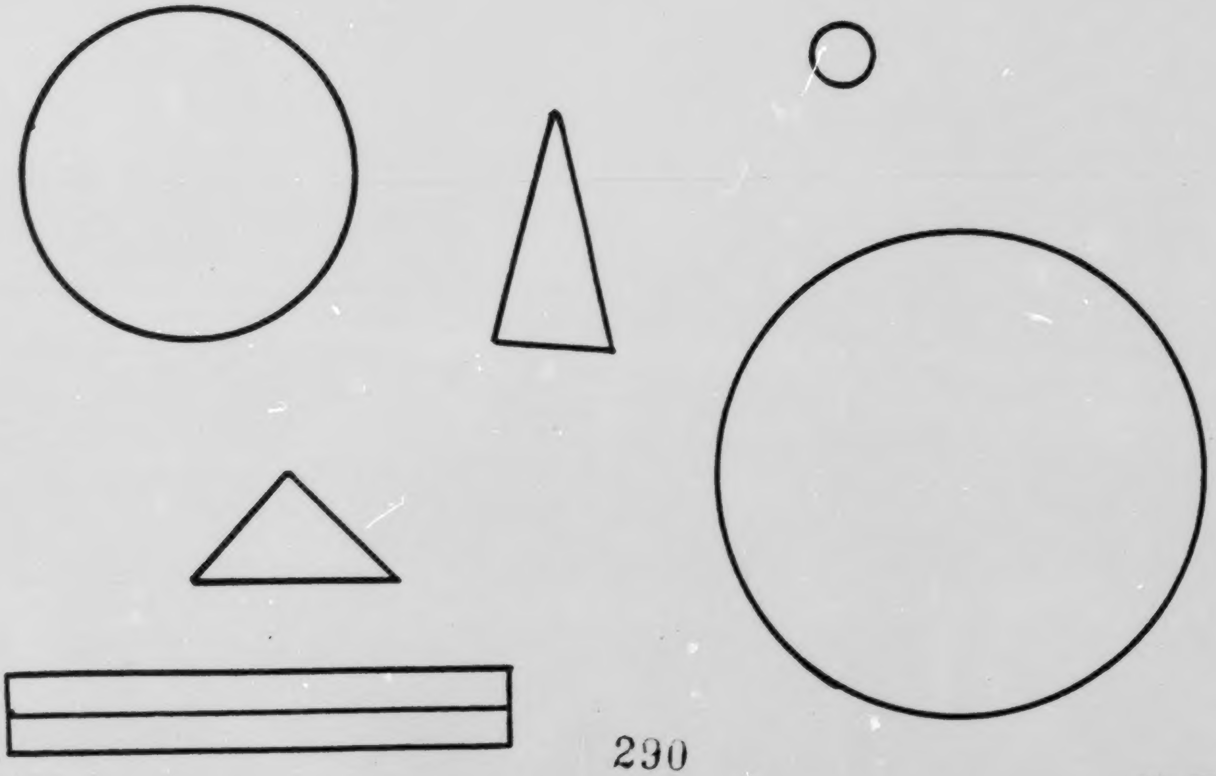
MAKE ME!

BIRDY

DIRECTIONS:

1. Cut these pieces out.
2. Paste them on another piece of paper to make a:

bird



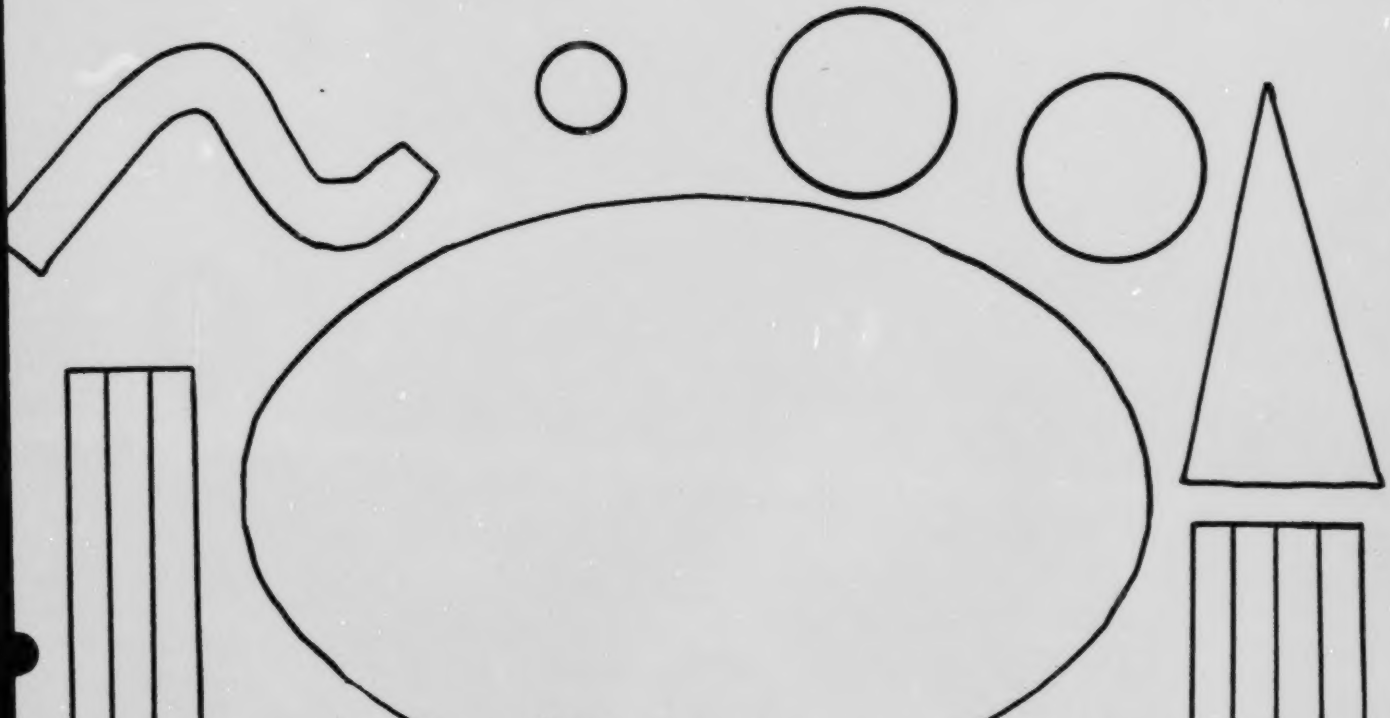
MAKE ME!

MOUSE AROUND THE HOUSE

DIRECTIONS:

1. Cut these pieces out.
2. Paste them on another piece of paper to make a:

mouse

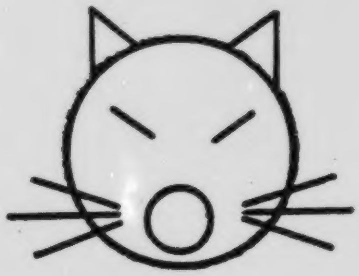


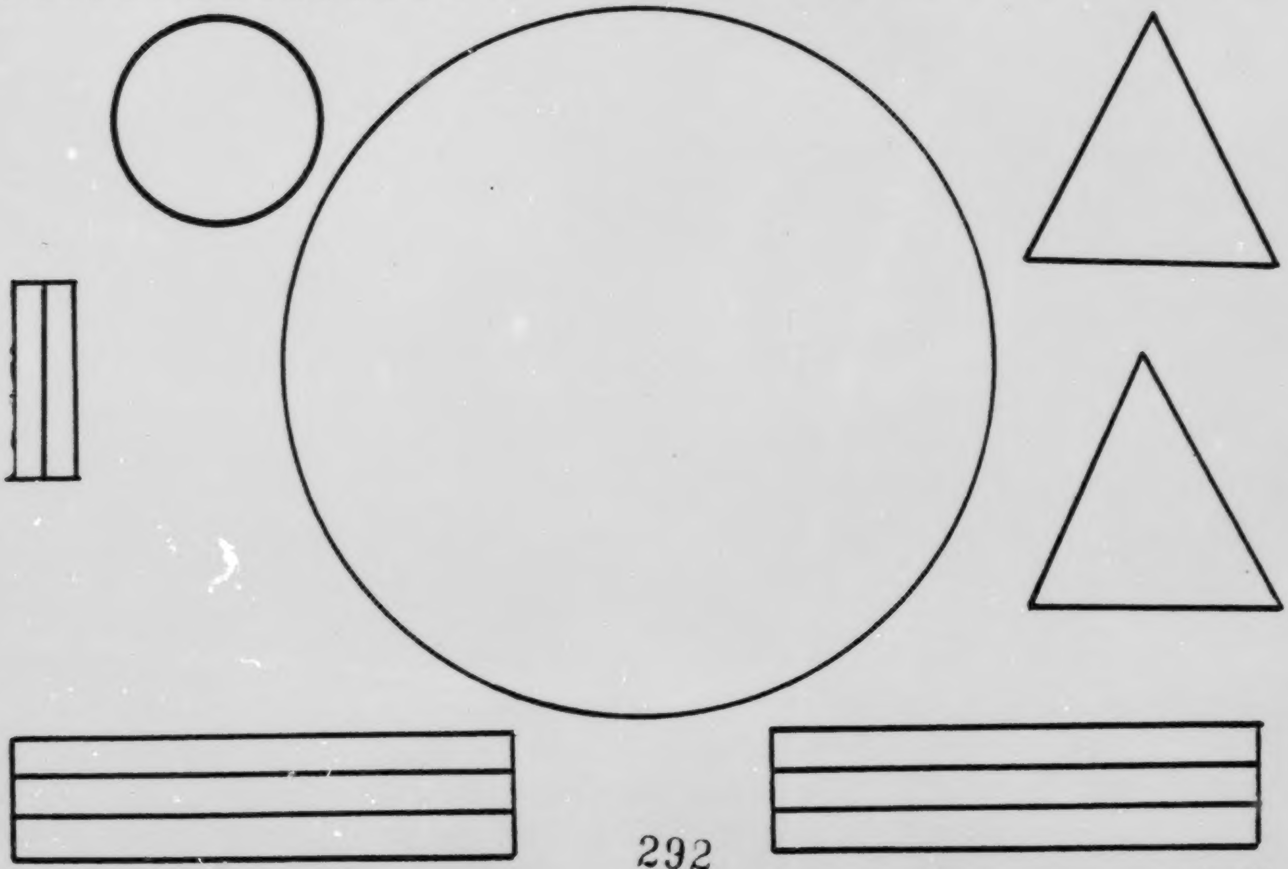
MAKE ME!

KITTY CAT

DIRECTIONS:

1. Cut these pieces out.
2. Paste them on another piece of paper to make a cat like this.
3. Color the cat if you want.



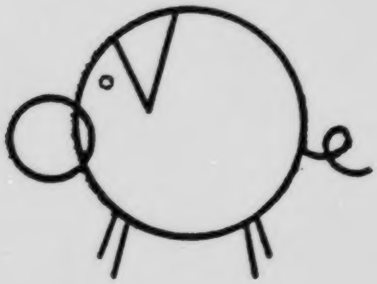


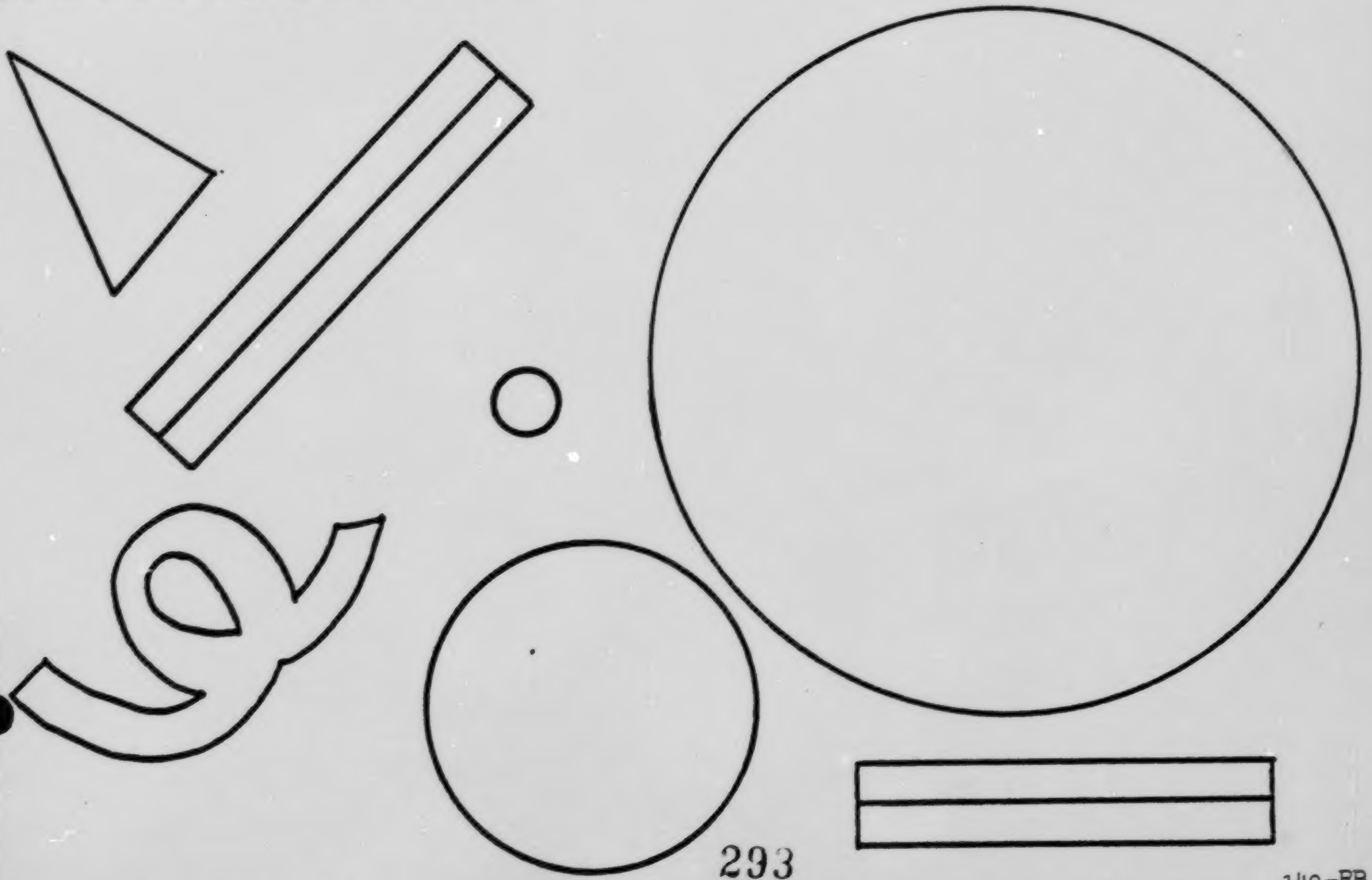
MAKE ME!

PIGGLY WIGGLY

DIRECTIONS:

1. Cut these pieces out.
2. Paste them on another piece of paper to make a pig like this.
3. Color the pig if you want.

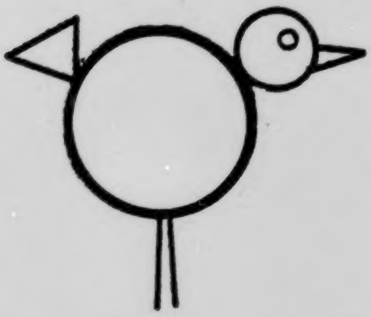


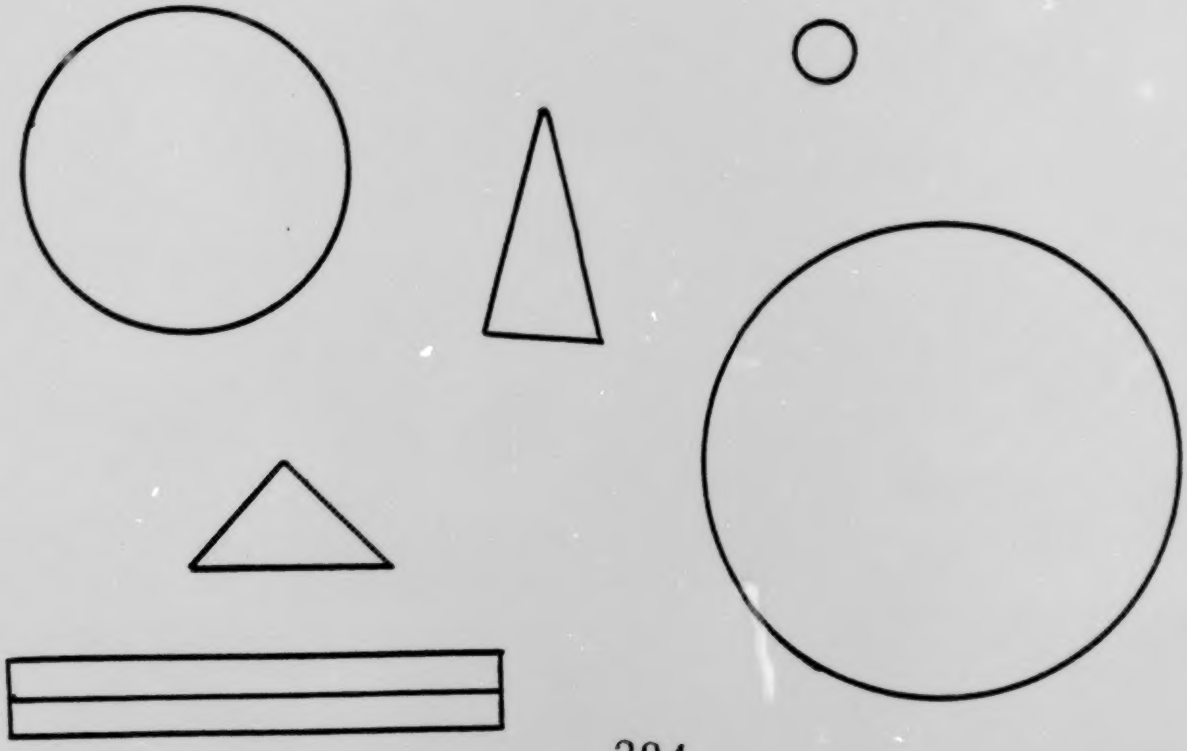


BIRDY

DIRECTIONS:

1. Cut these pieces out.
2. Paste them on another piece of paper to make a bird like this.
3. Color the bird if you want.

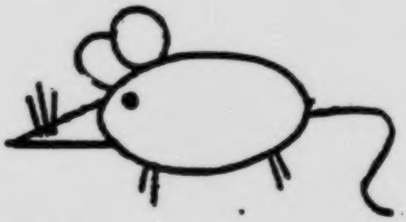


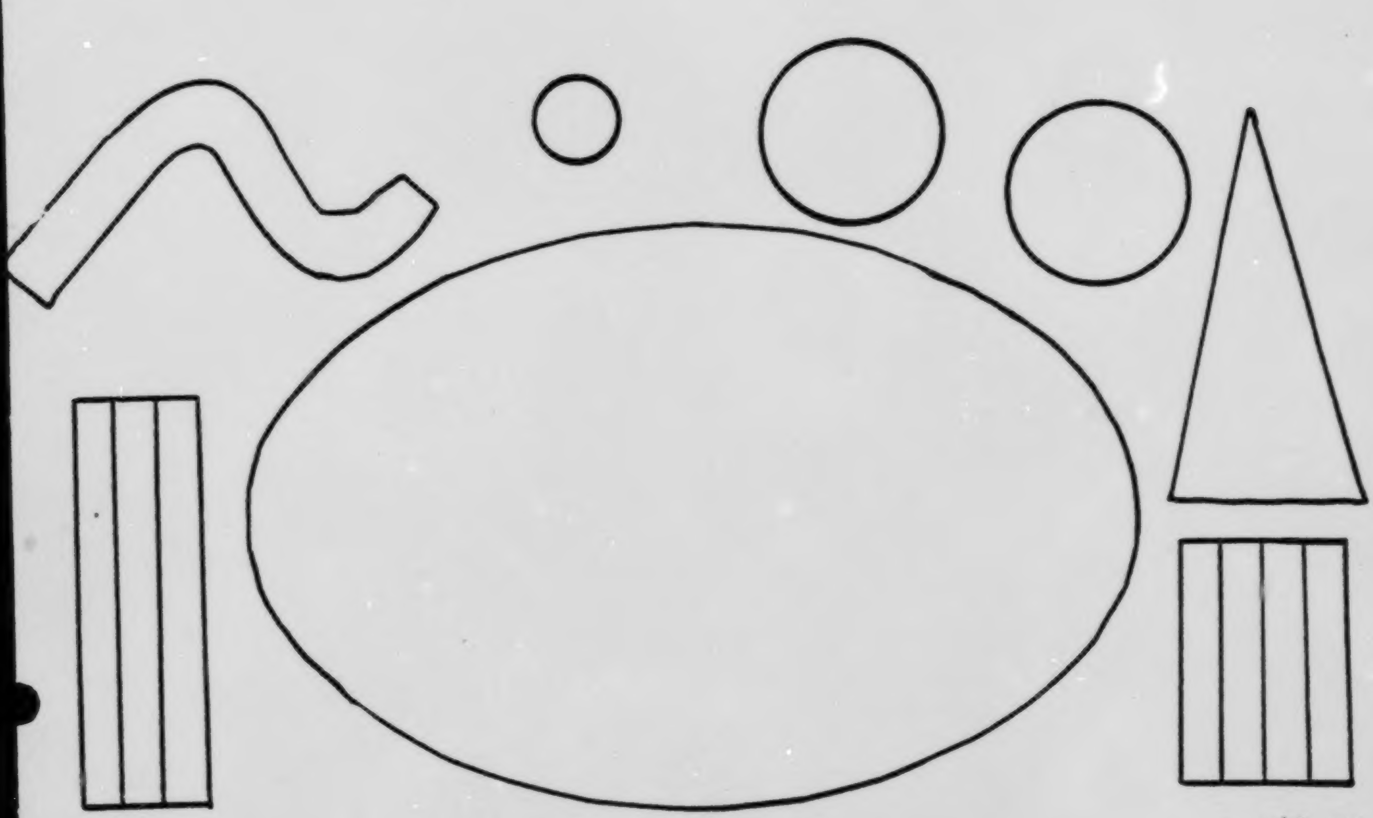


MOUSE AROUND THE HOUSE

DIRECTIONS:

1. Cut these pieces out.
2. Paste them on another piece of paper to make a mouse like this.
3. Color the mouse if you want.





ERASED PICTURE MULTIPLE CHOICE

OBJECTIVES: Develop visual closure ability
Develop visual discrimination ability

MATERIALS: Erased Picture Multiple Choice sheets (included)
pencils or crayons

PREPARATION:

The worksheets may either be...

laminated and used with a grease pencil
placed under a plastic cover and used with a grease pencil
reproduced and distributed to students for one-time use with a pencil

ACTIVITY:

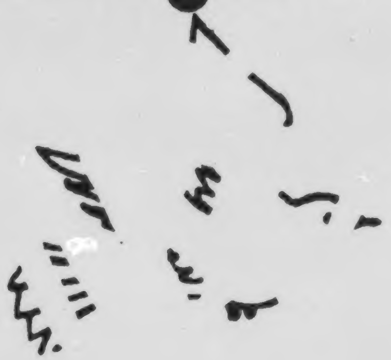
◑Students study the picture above the dotted line.

●Students decide which picture below the dotted line is a completed version of the picture above the dotted line. Students mark the correct answer with a circle, an X, or color the picture.

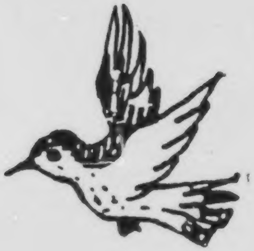
◐Students explain why they chose the answers they did.

Answers:

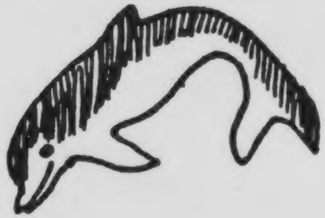
Ex.	e
1.	e
2.	d
3.	a
4.	b
5.	b
6.	a
7.	f
8.	a
9.	e
10.	d
11.	f
12.	c
13.	b
14.	b
15.	d
16.	a
17.	a
18.	b
19.	e.
20.	c
21.	c
22.	f
23.	c
24.	f
25.	c
26.	d
27.	s
28.	c
29.	d
30.	f
31.	e



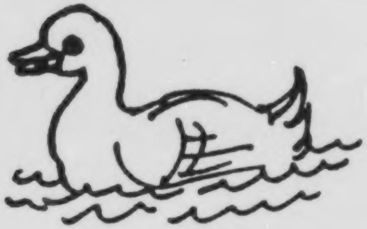
a.



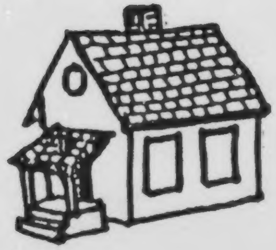
b.



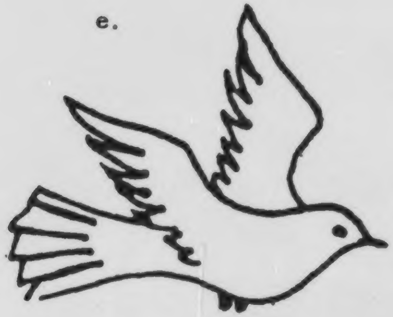
c.



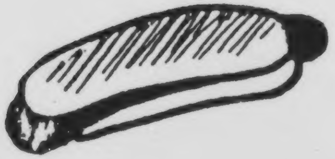
d.



e.



f.



ERASED PICTURE MULTIPLE CHOICE - EXAMPLE

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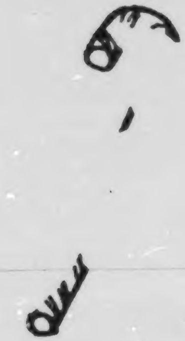
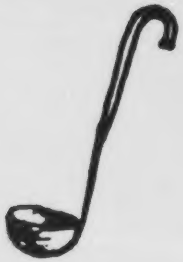
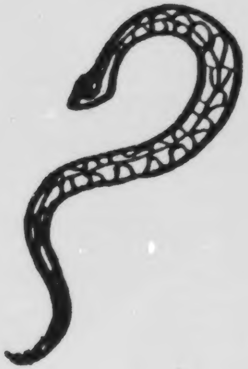
ERASED PICTURE MULTIPLE CHOICE - 1



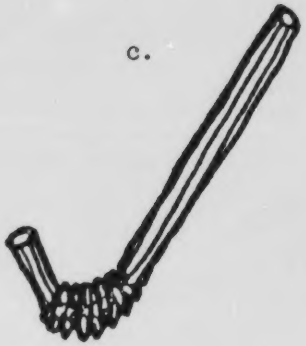
a.



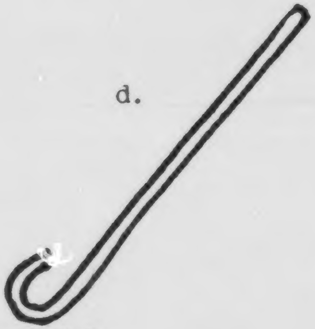
b.



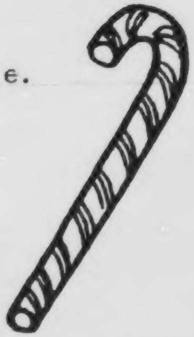
c.



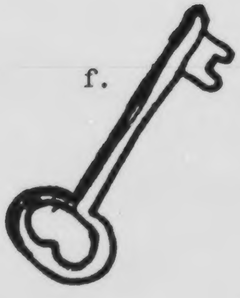
d.



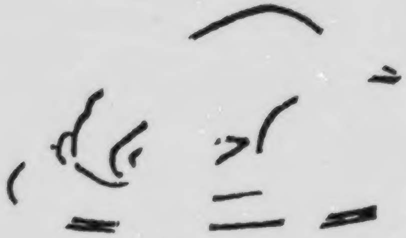
e.



f.

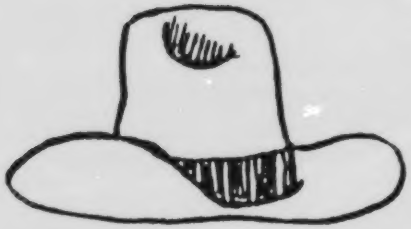


ERASED PICTURE MULTIPLE CHOICE - 2

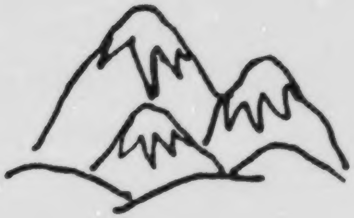


3

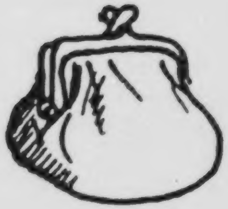
a.



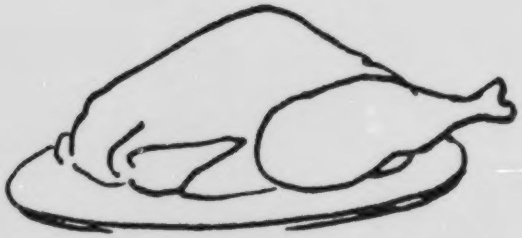
b.



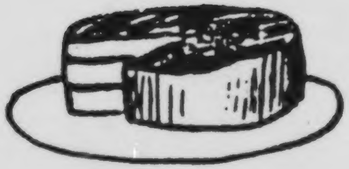
c.



d.



e.



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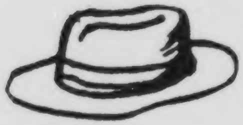
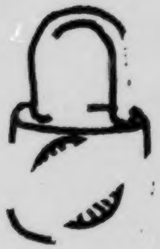
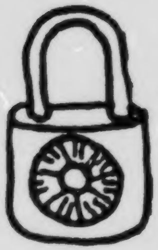


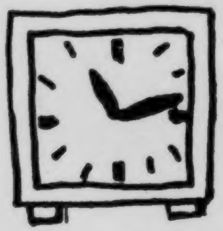
146-RB



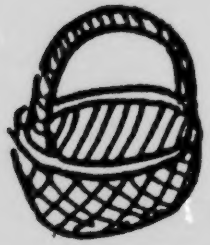
a.



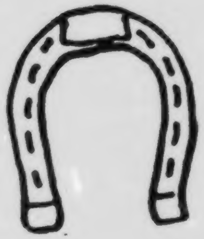
b.



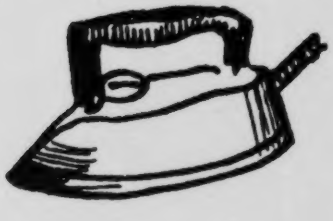
c.



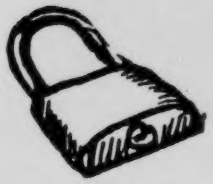
d.



e.

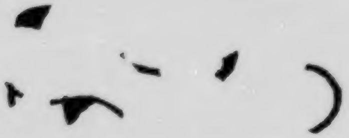


f.

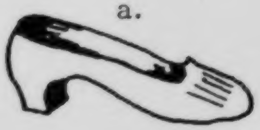


ERASED PICTURE MULTIPLE CHOICE - 3

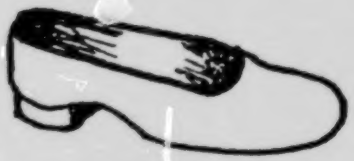
147-RB



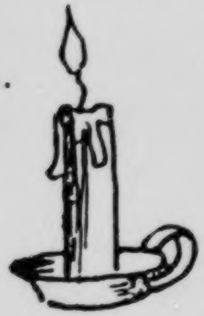
a.



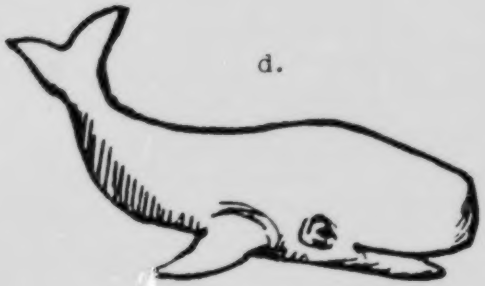
b



c.



d.



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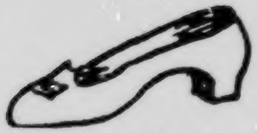

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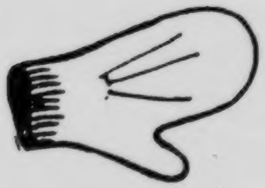
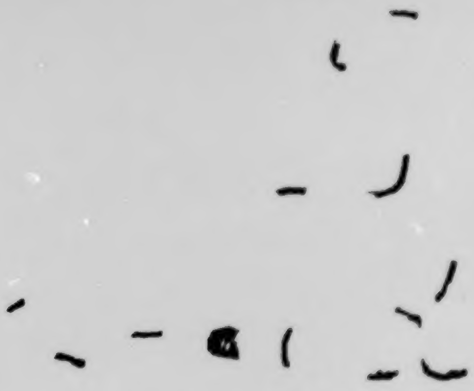
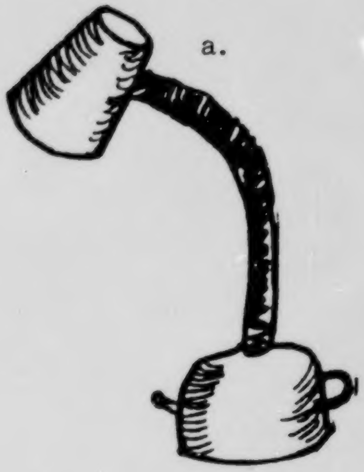


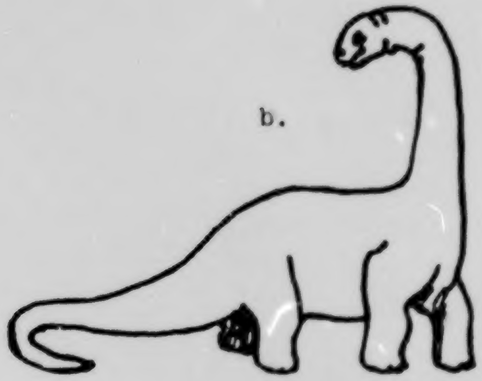
ERASED PICTURE MULTIPLE CHOICE - 4



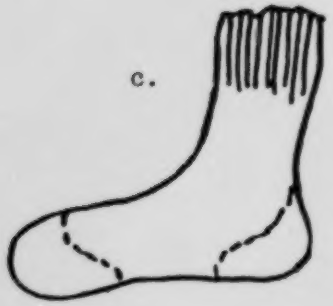
a.



b.



c.



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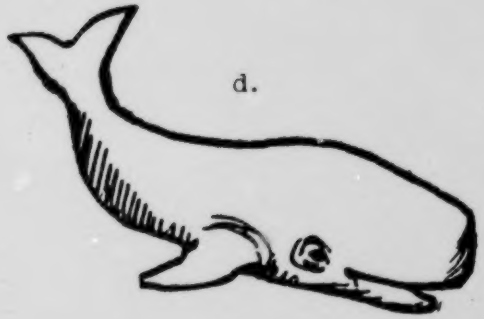
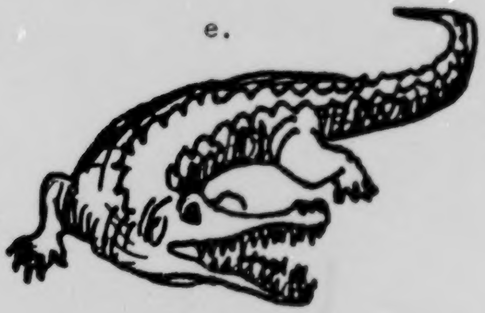
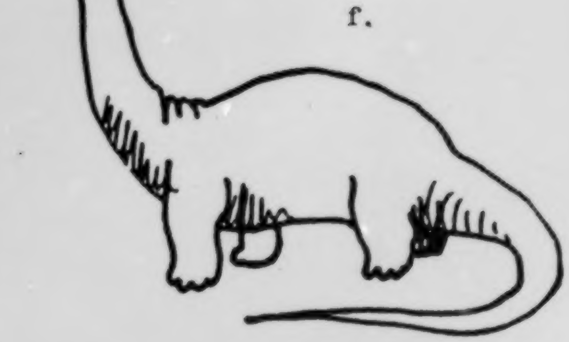


e.

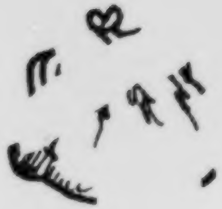


f.

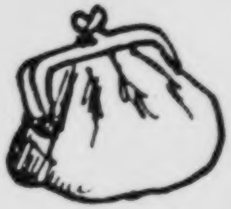


ERASED PICTURE MULTIPLE CHOICE - 5

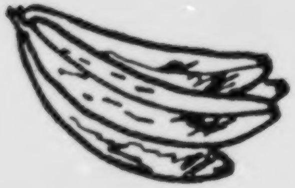
149 -RB



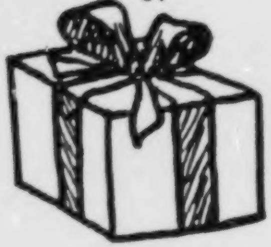
a.



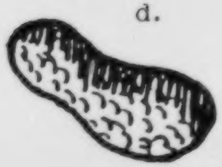
b.



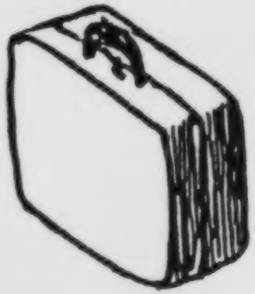
c.



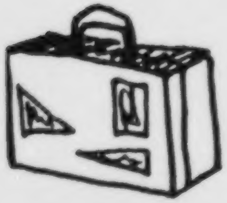
d.



e.

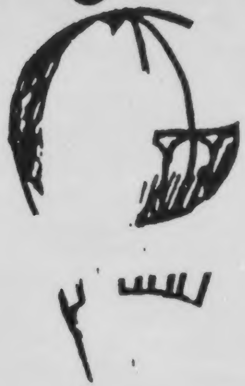


f.



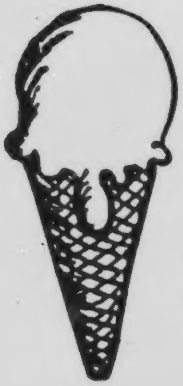
ERASED PICTURE MULTIPLE CHOICE - 6

150 - RB

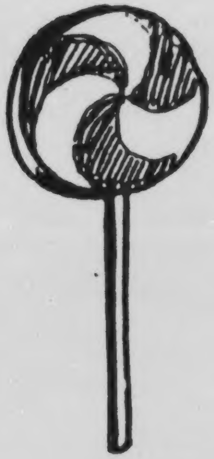


ERASED PICTURE MULTIPLE CHOICE - 7

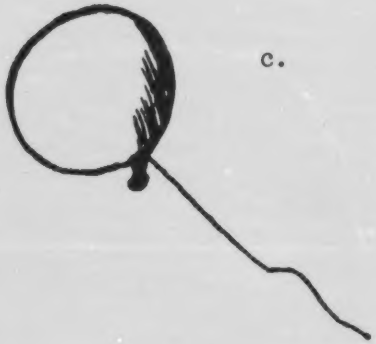
a.



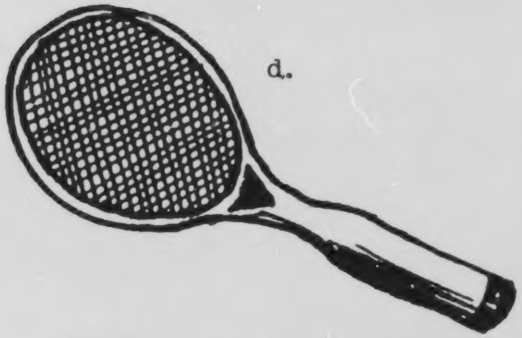
b.



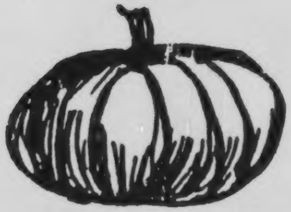
c.



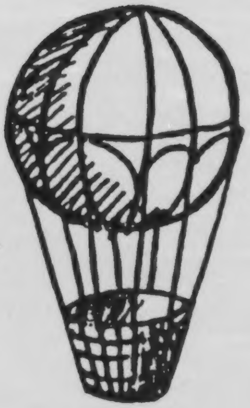
d.



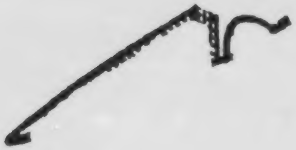
e.



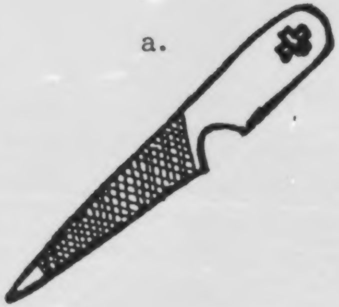
f.



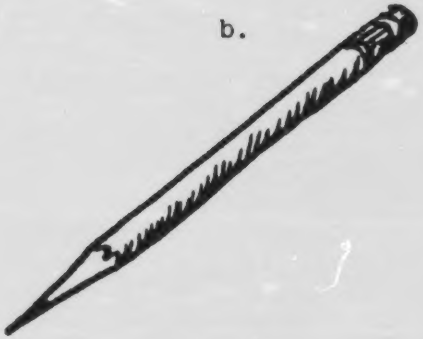
14



a.



b.



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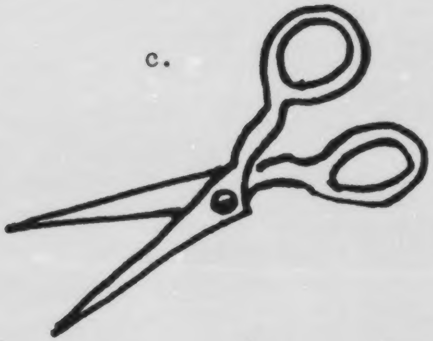

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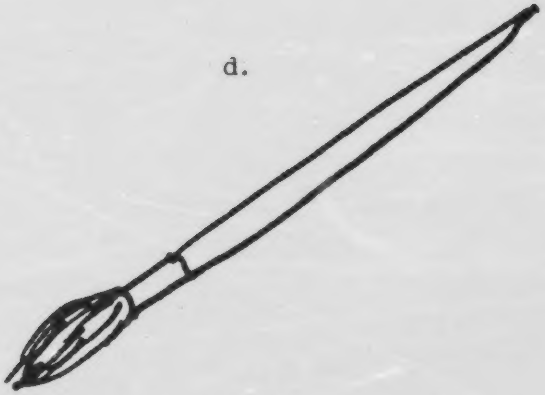
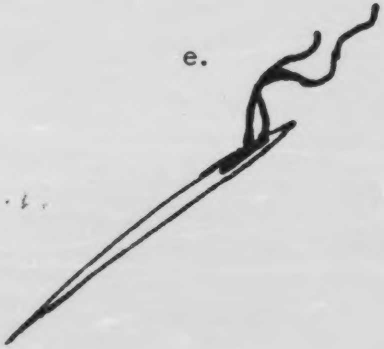
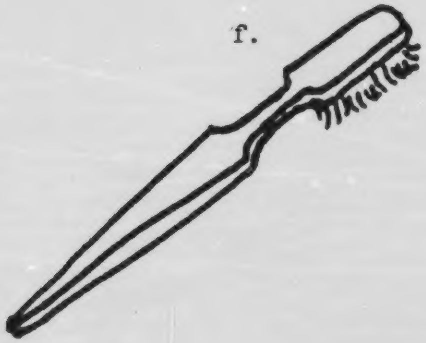


e.

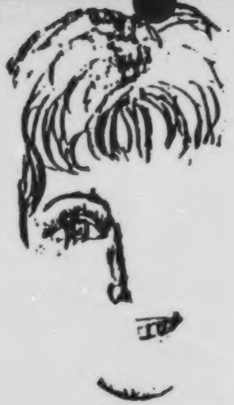


f.

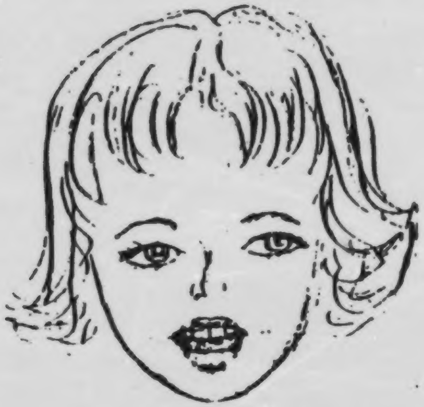


ERASED PICTURE MULTIPLE CHOICE - 8

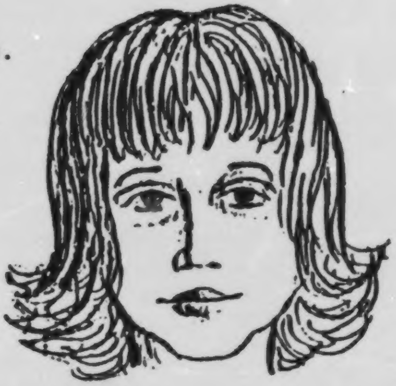
152-RB



a.



b.



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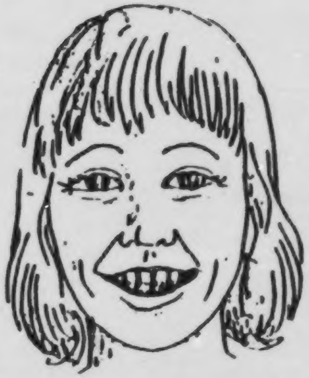
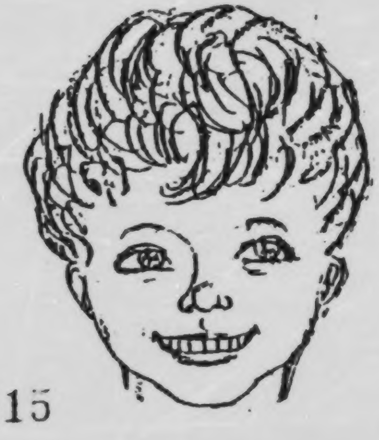
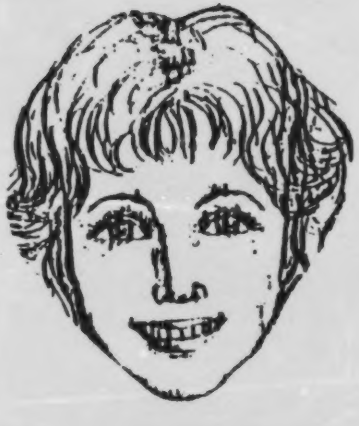


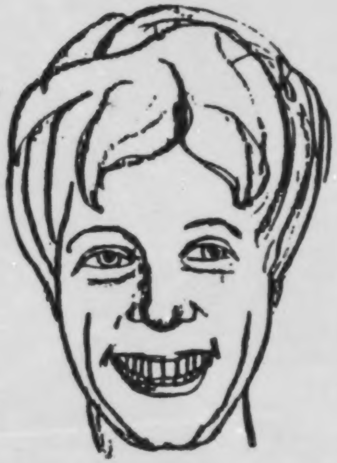
d.



e.

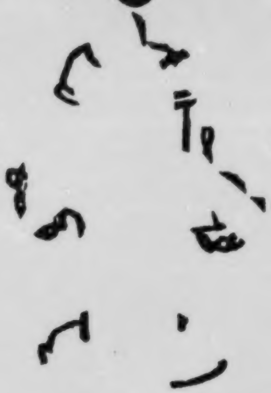


f.

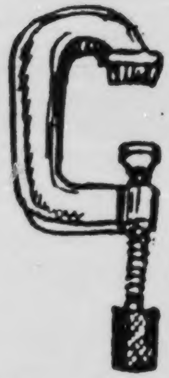


ERASED PICTURE MULTIPLE CHOICE - 9

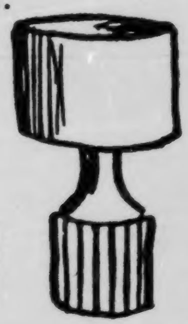
153-RB



a.



b.



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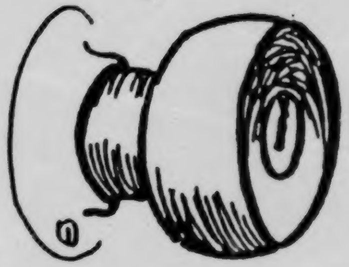
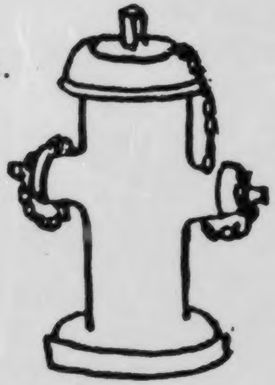


d.



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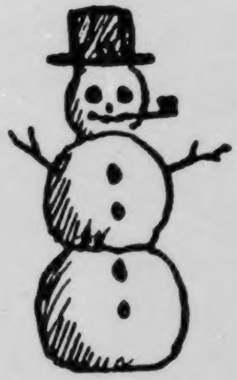
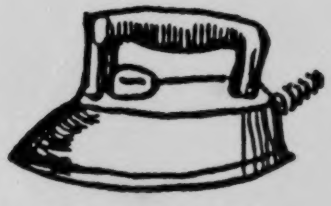
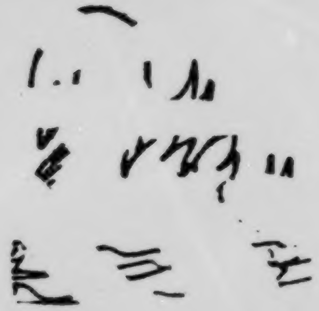


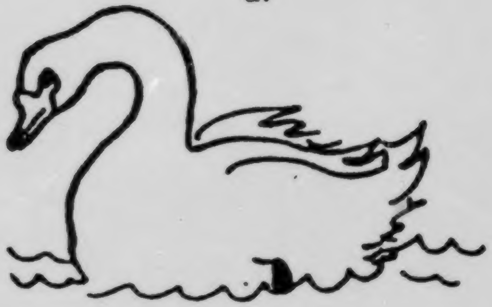
f.



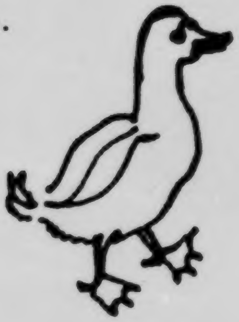
ERASED PICTURE MULTIPLE CHOICE - 10

154-RB





a.



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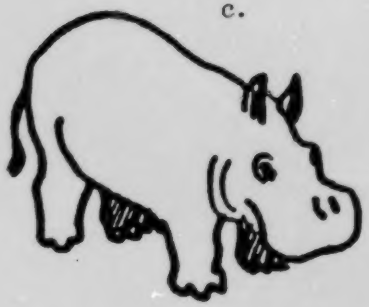
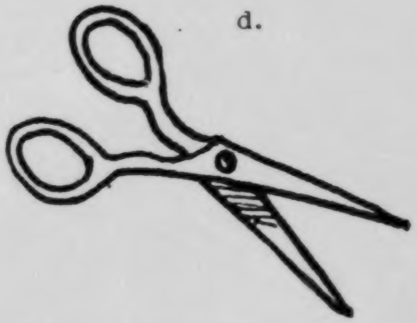
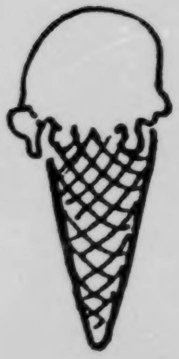


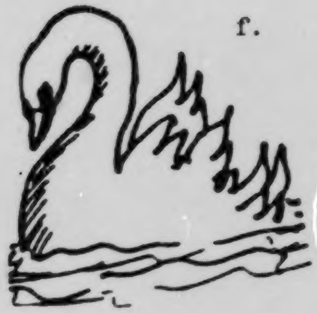
c.



d.



e.

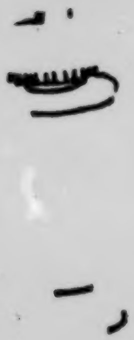


f.

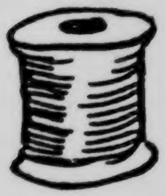
ERASED PICTURE MULTIPLE CHOICE - 11

155-RB

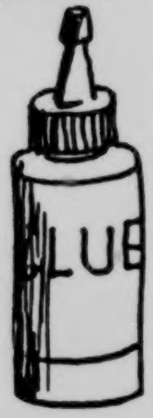
ERASED PICTURE MULTIPLE CHOICE - 12



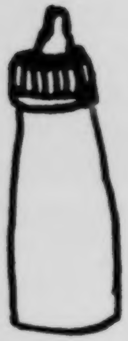
a.



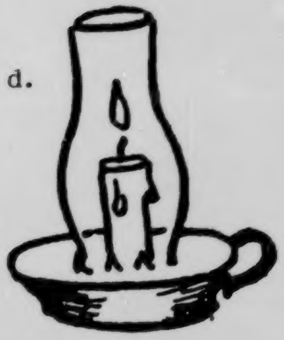
b.



c.



d.



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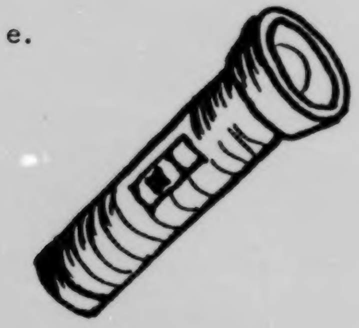
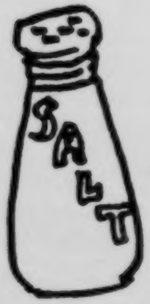
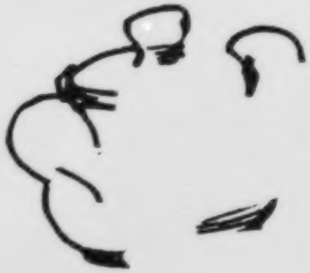


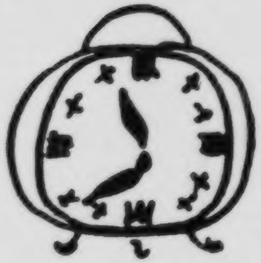
f.



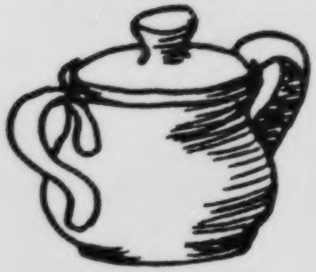


ERASED PICTURE MULTIPLE CHOICE - 13

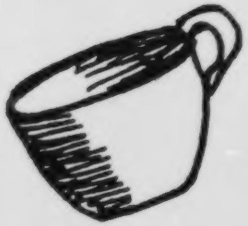
a.



b.



c.



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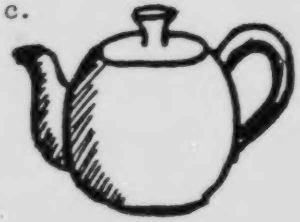
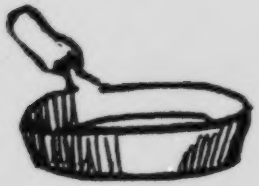
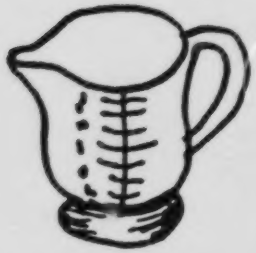


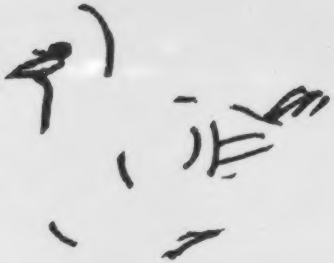
d.



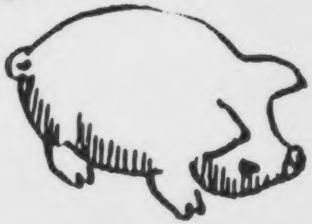
f.



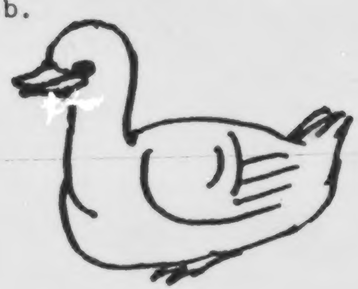
157-RB



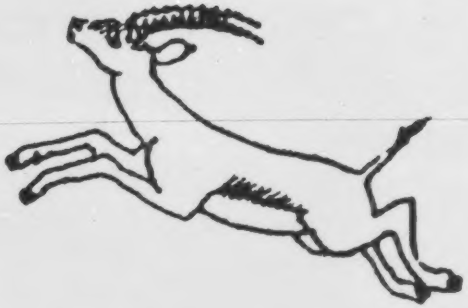
a.



b.



c.



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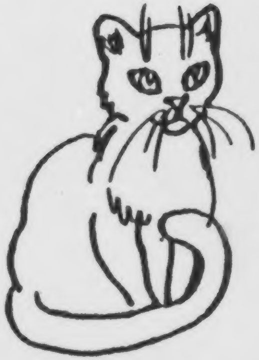
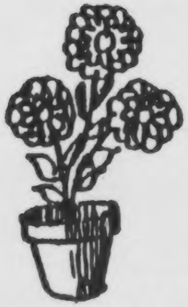


e.



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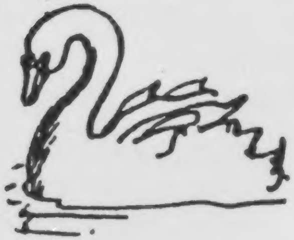
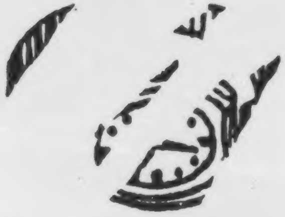
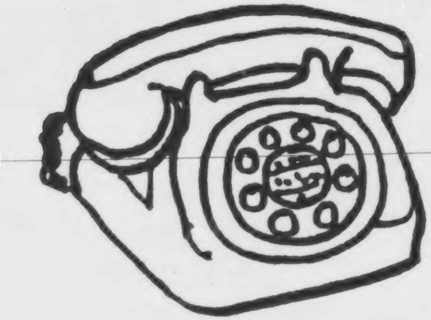


ERASED PICTURE MULTIPLE CHOICE - 14

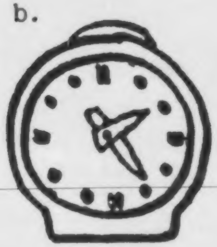
158-RB



a.



b.



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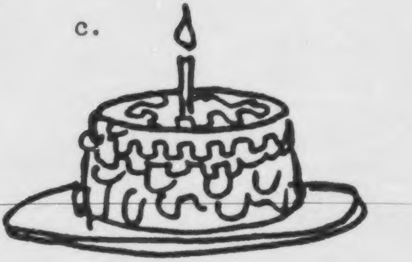

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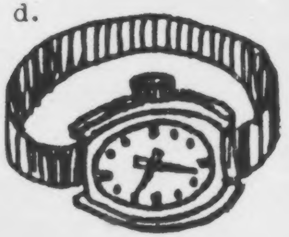
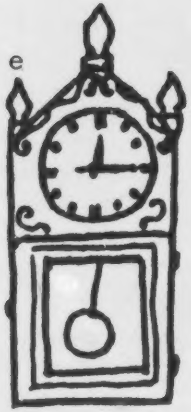


e



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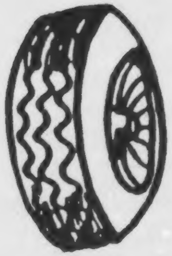
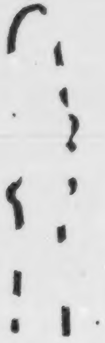
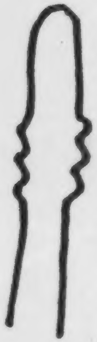


ERASED PICTURE MULTIPLE CHOICE - 15

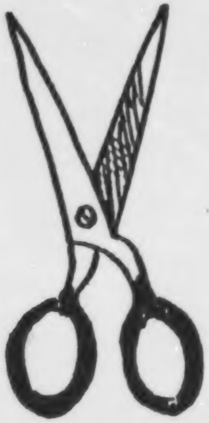
ERASED PICTURE MULTIPLE CHOICE - 16



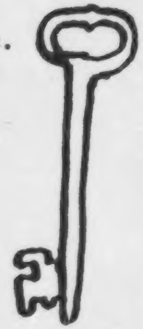
a.



b.



c.



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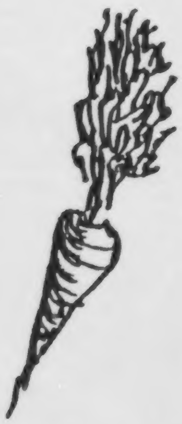
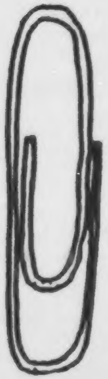
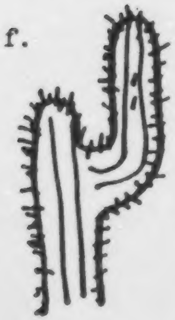


e.

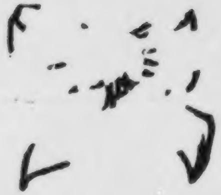


f.

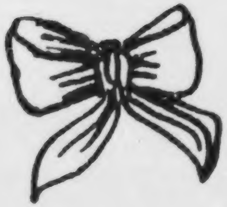


16Q-RB

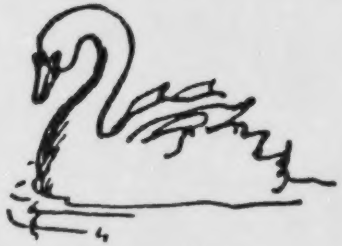
ERASED PICTURE MULTIPLE CHOICE - 17



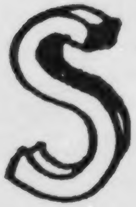
a.



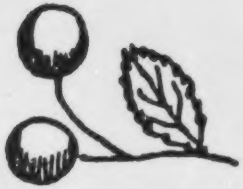
b.



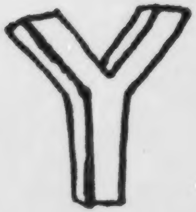
c.



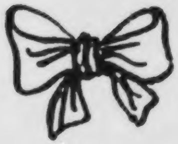
d.

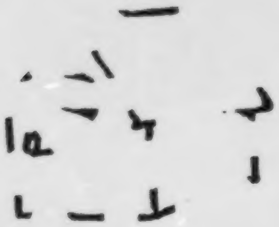


e.

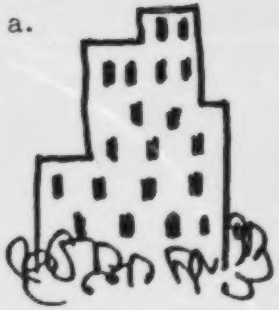


f.

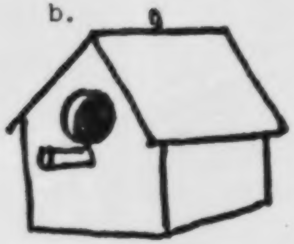




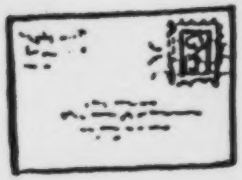
a.



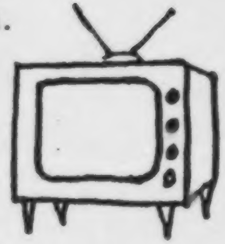
b.



c.



d.



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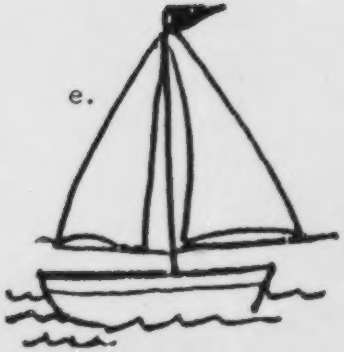

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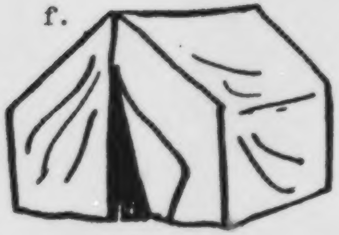
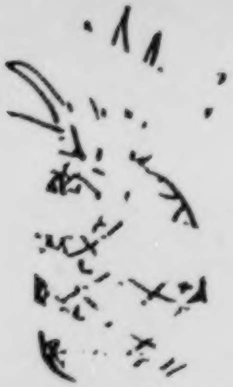
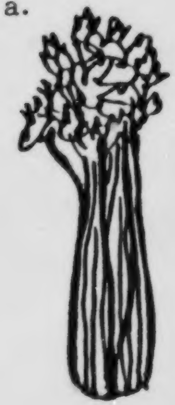


ERASED PICTURE MULTIPLE CHOICE - 18

ERASED PICTURE MULTIPLE CHOICE - 19



a.



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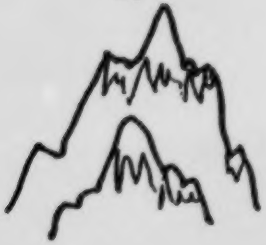

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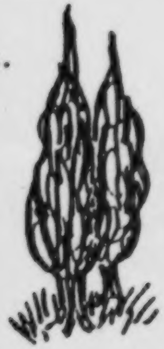

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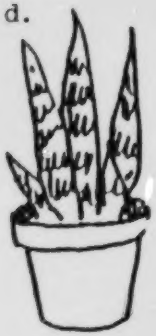

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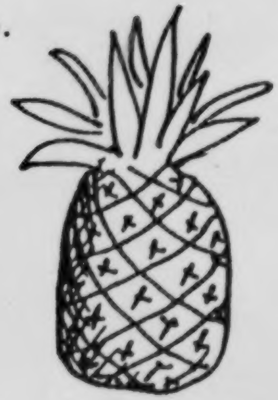

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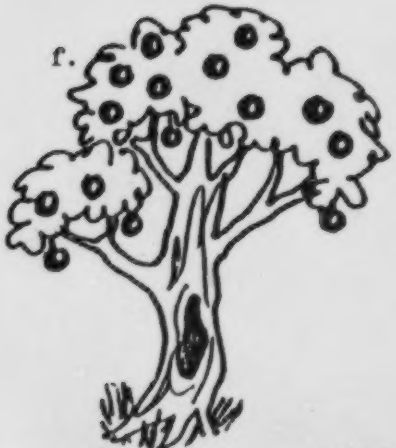
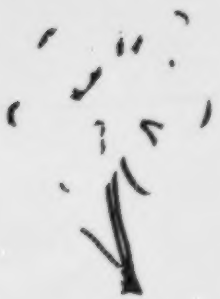
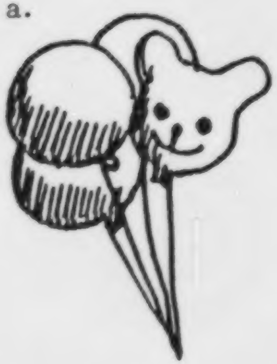




a.



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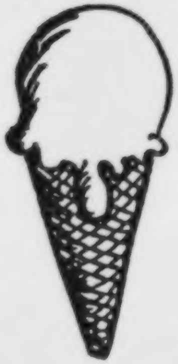

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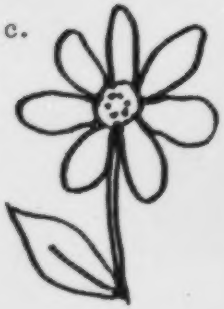

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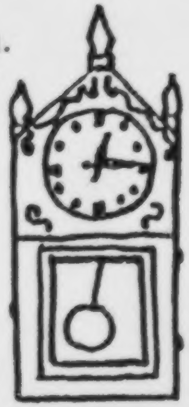
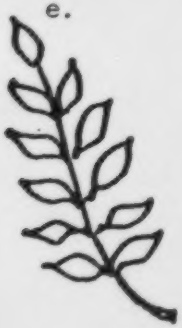


e.



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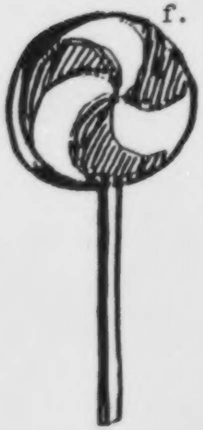
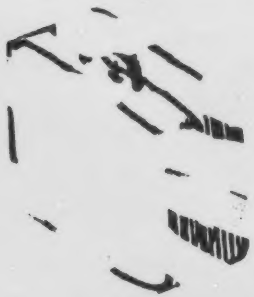
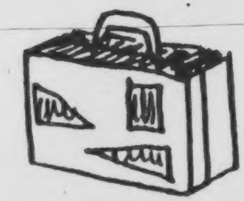


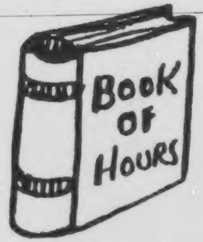
ERASED PICTURE MULTIPLE CHOICE - 20



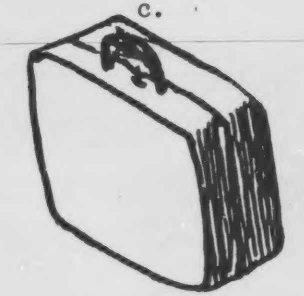
a.



b.


BOOK OF HOURS

c.



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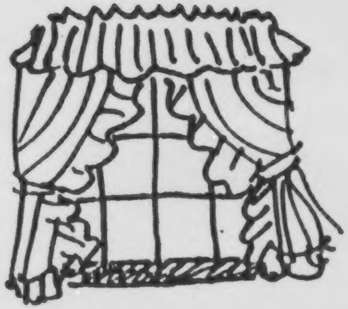

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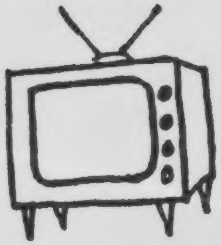

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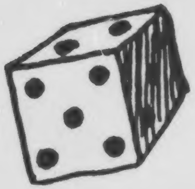

ERASED PICTURE MULTIPLE CHOICE - 21

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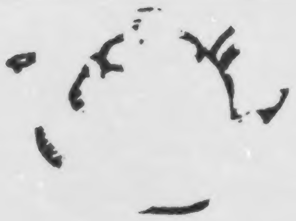
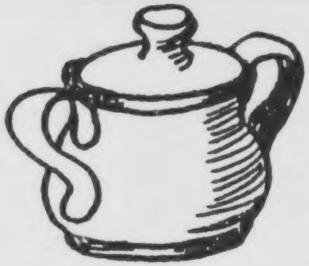
ERASED PICTURE MULTIPLE CHOICE - 22



a.



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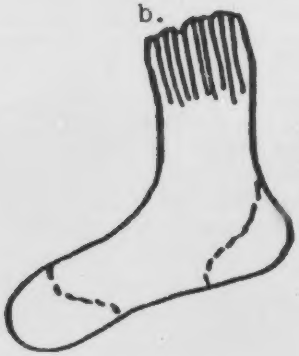

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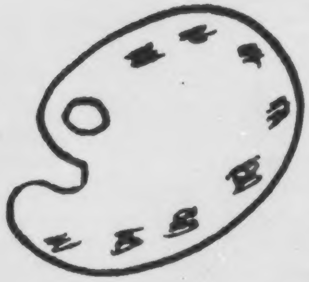

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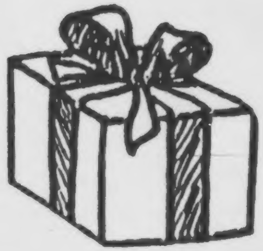
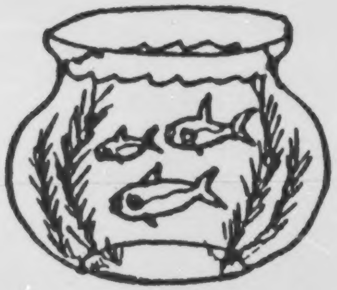


e.



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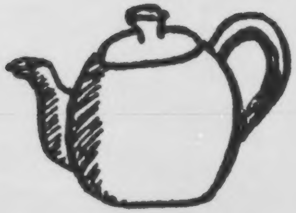

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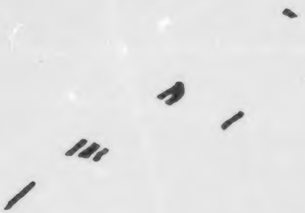
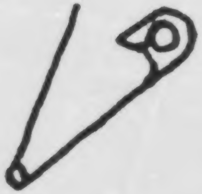
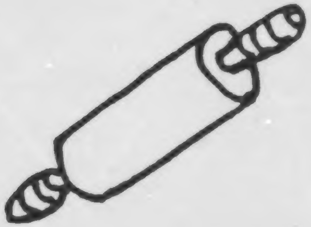
ERASED PICTURE MULTIPLE CHOICE - 23



a.



b.



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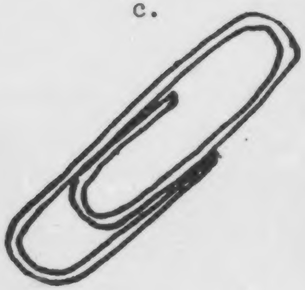
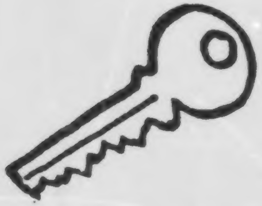
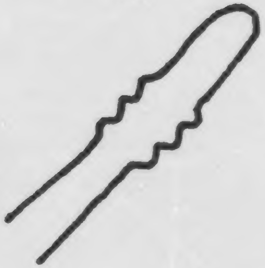


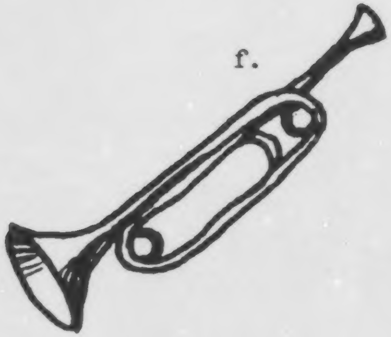
d.



e.

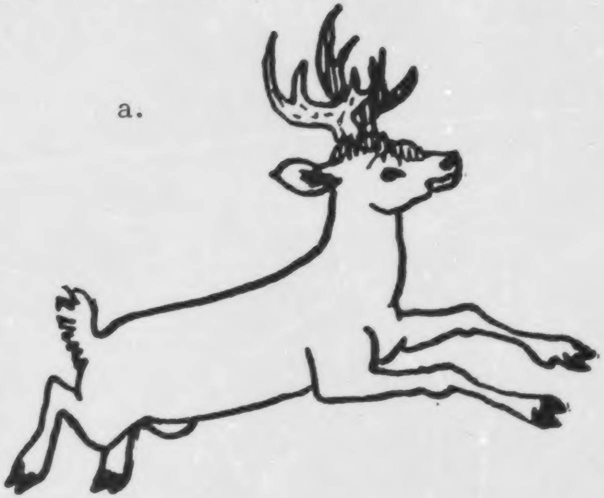


f.



ERASED PICTURE MULTIPLE CHOICE - 24

a.



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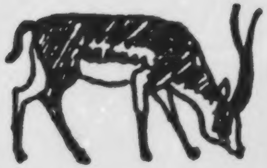

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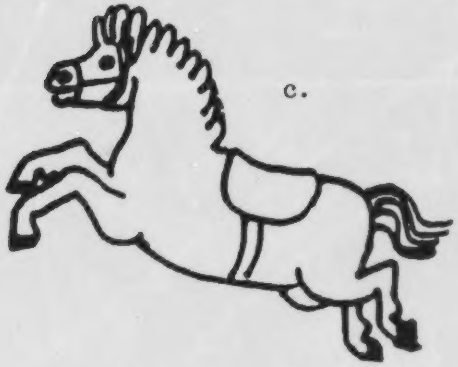

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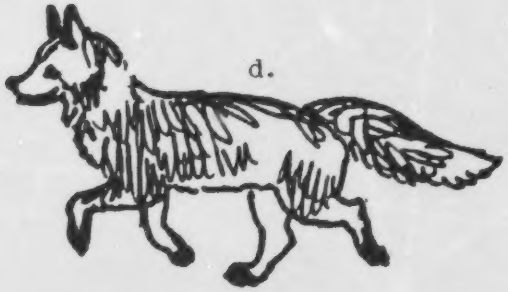

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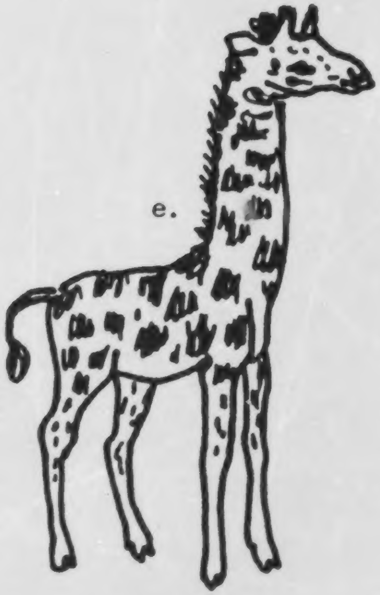
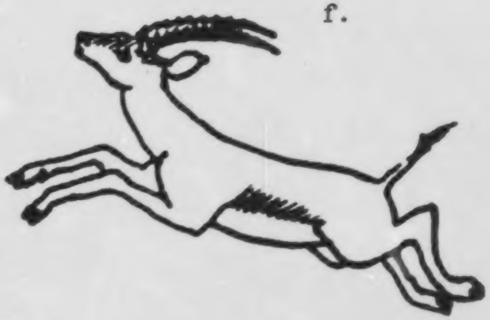


f.



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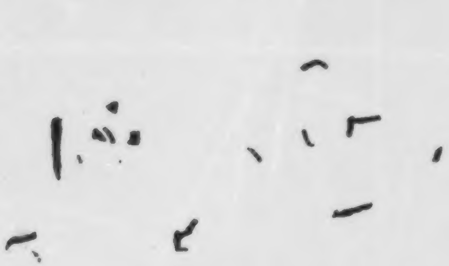
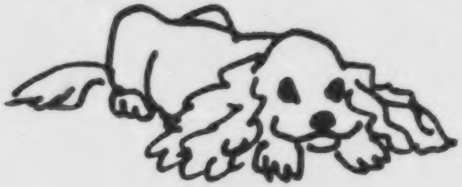
ERASED PICTURE MULTIPLE CHOICE - 25



a.



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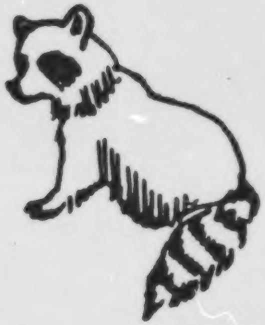

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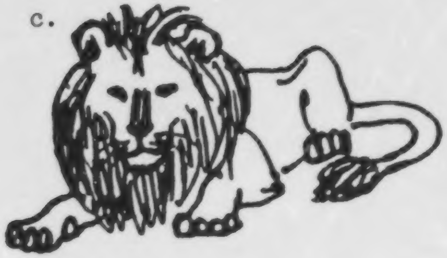

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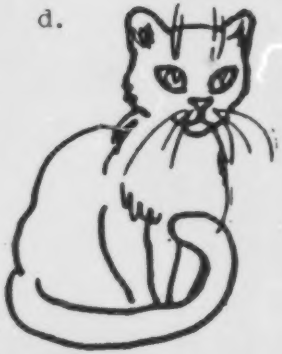

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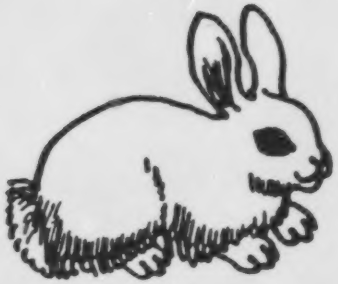

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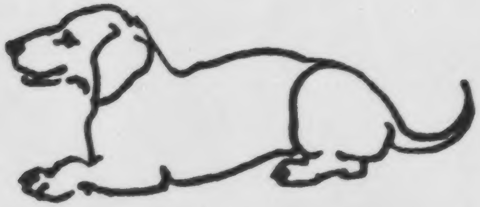
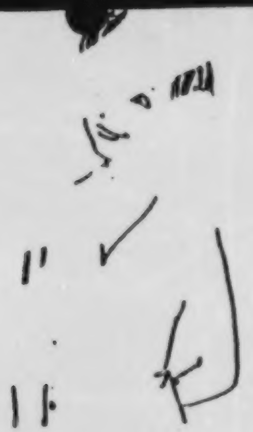


169-RB



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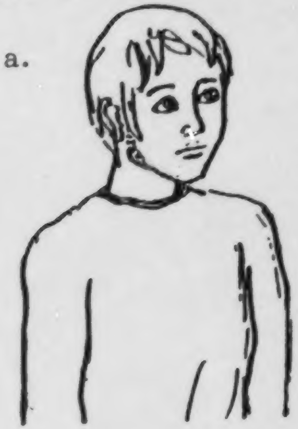
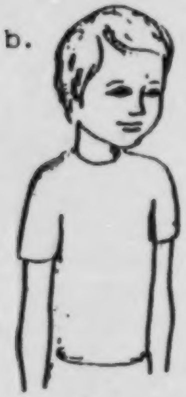


b.



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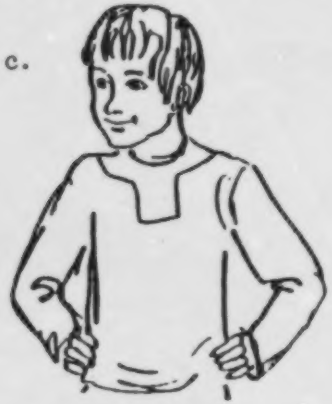

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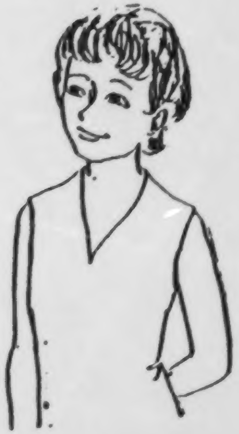

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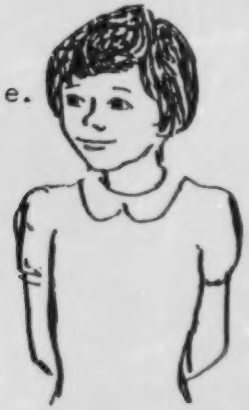
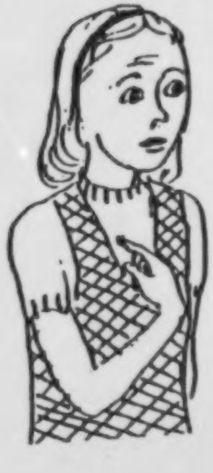
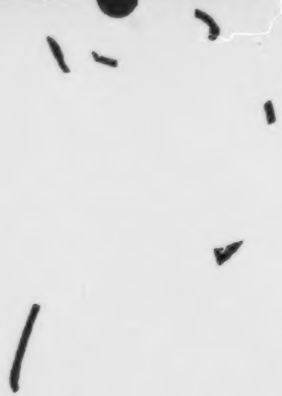


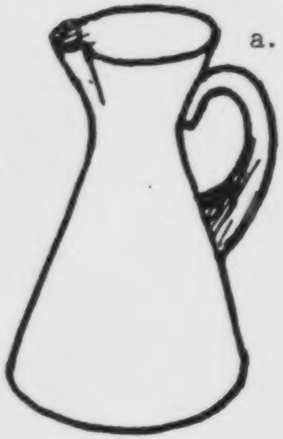
f.



ERASED PICTURE MULITPLE CHOICE - 26

170-RB

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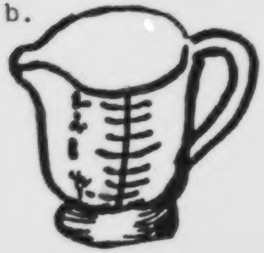
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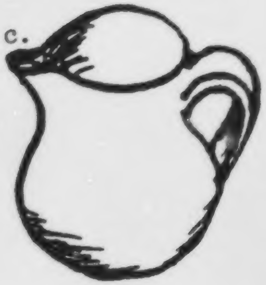
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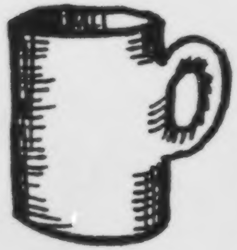
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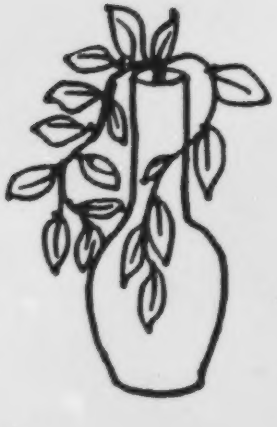
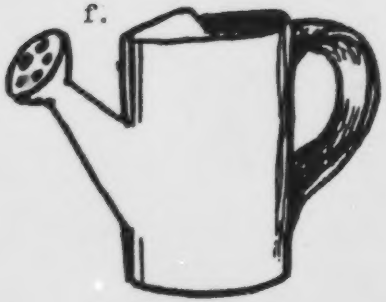
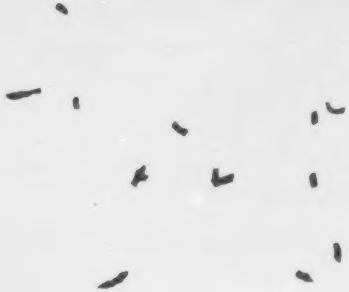
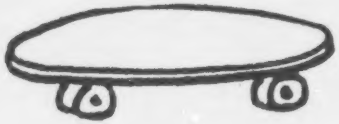

e.

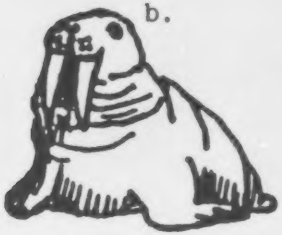

f.



a.



b.



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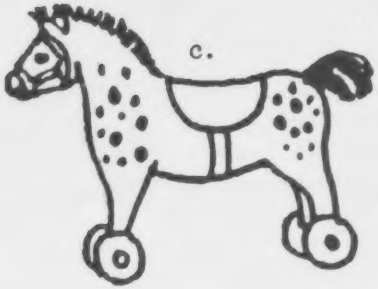
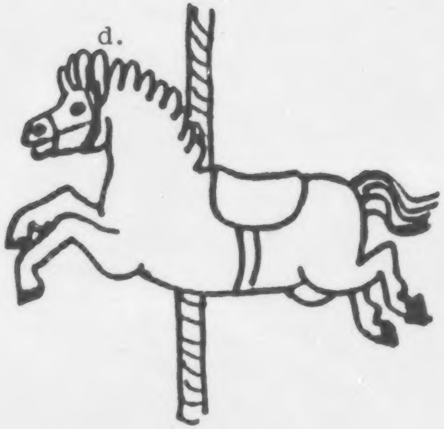
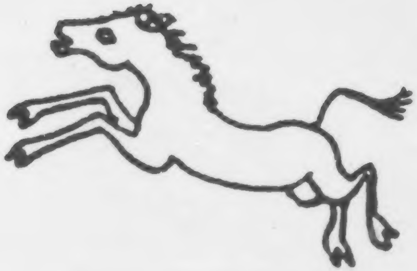


d.



e.



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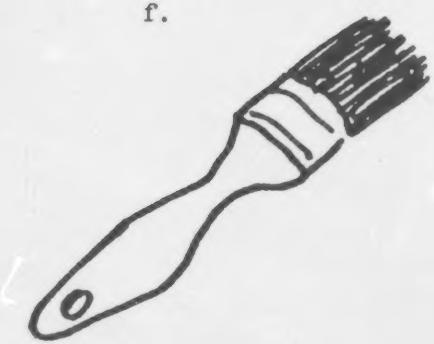
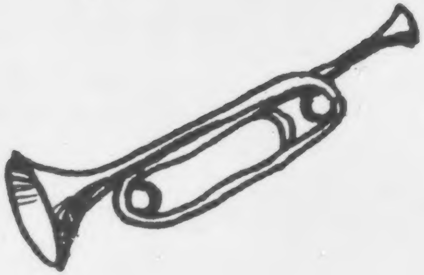


ERASED PICTURE MULTIPLE CHOICE - 28

a.



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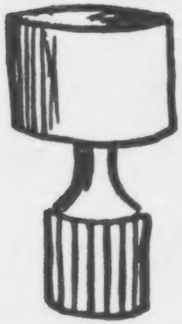

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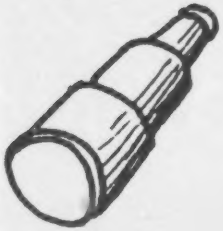

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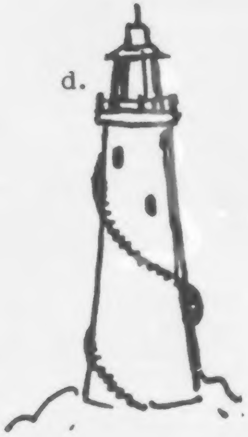
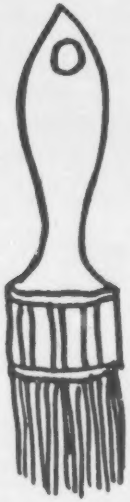


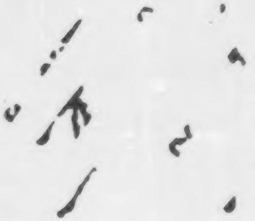
e.

f.



ERASED PICTURE MULTIPLE CHOICE - 29

173-RB



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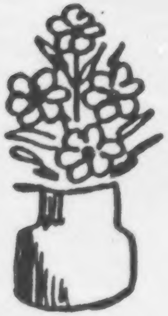

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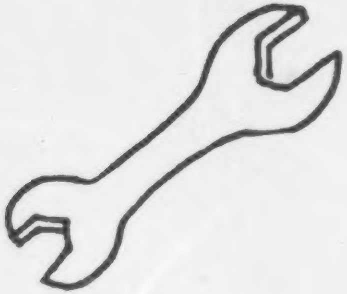

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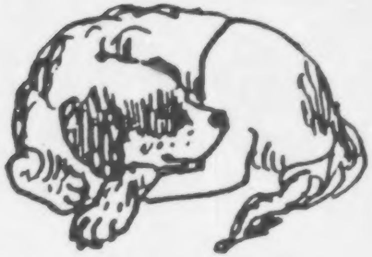

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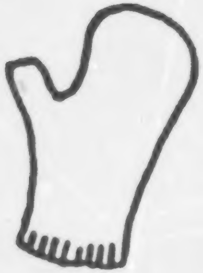

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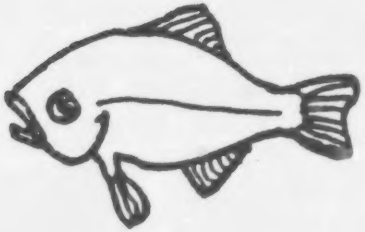

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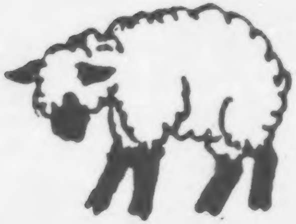
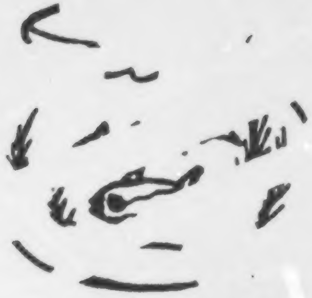


ERASED PICTURE MULTIPLE CHOICE - 30

174-RB



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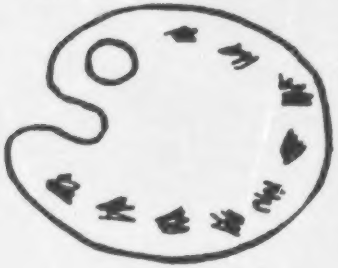

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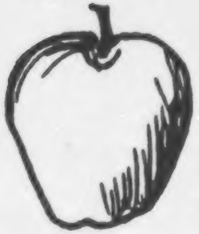

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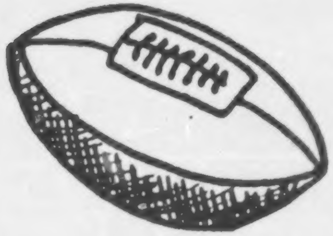

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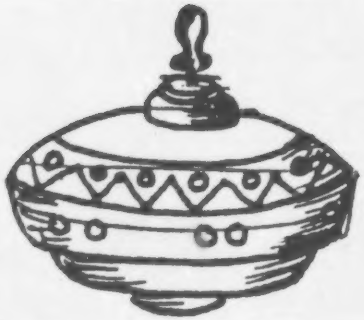

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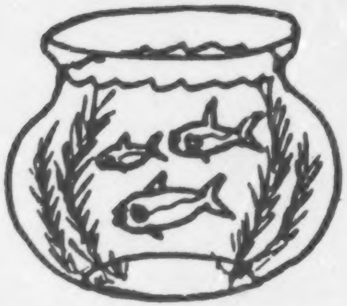
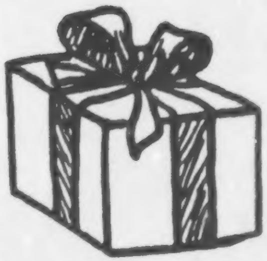


f.



ERASED PICTURE MULTIPLE CHOICE - 31

175-RB

INTEGRATED ACTIVITIES

I SAY - YOU SAY

OBJECTIVES: Expression of associated ideas
Divergent thinking

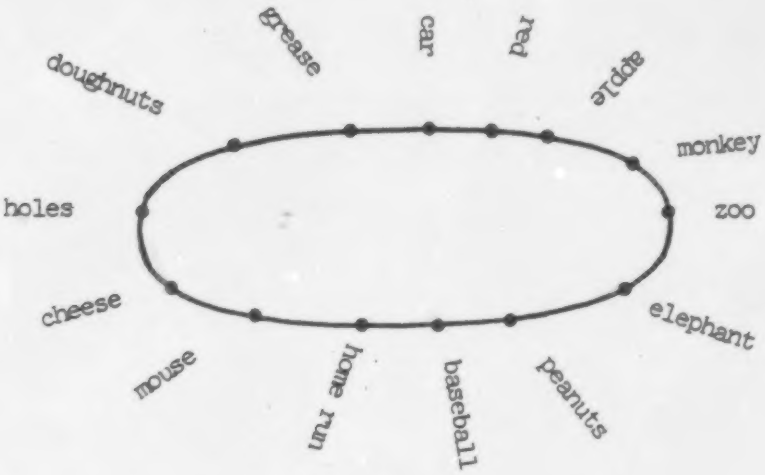
MATERIALS: none

ACTIVITY:

●Seat students in a circle.
First person says:

"I say mouse. You say __________."
Second person says:
"I say cheese. You say____________."

Thus, a "word chain" is formed around the circle with everyone having a chance to contribute.


mouse
cheese
holes
doughnuts
grease
car
red
apple
monkey
zoo
elephant
peanuts
baseball
home run

FOLLOW-UP:

◐Record the "word chain" on blackboard.
◐Classify the words.
●Write sentences, stories, poems...
◐Alphabetize the list of words.
◑Pantomime each word.
◑Draw a picture of selected words.

SILLY SIMON

OBJECTIVES: Following oral directions
Improving listening skills through novelty

MATERIALS: various objects

ACTIVITY:

Students are asked to do silly, bizarre, novel actions using the traditional "Simon Says" format. Caution should be taken to avoid physical or verbal abuse. Be creative.

Some suggested commands:

Walk around the table and make buzzing sounds like a bee.
Put a piece of chalk on your head like a hat.
Lift a ball as if it weighed a ton, as if it was a feather.
Pretend you are writing with a pencil the size of a telephone pole.
Let yourself bounce like a rubber ball.
Spin like a top.
Stretch your body like a rubber band.
Pretend you are the strongest person in the world. Show me how you would push two cars apart.
Twist your body like a pretzel.
Shake yourself like jello.
Pretend you are a tree in a wind storm.
Blow yourself up like a balloon and then let your air out.
Pretend you are walking barefoot over sharp stones or pebbles.
Tie yourself into a knot...pull yourself tighter...untie yourself.
Pretend you are a rocket ship blasting off. 5 - 4 - 3 - 2 - 1 - "Blast Off!"
Be a feather floating down to the ground.
Pretend you are frozen solid.
Pretend you are melting.

VARIATIONS:

Teacher asks students to do three movements, one after another.

Teacher does a movement. Students write what they think the teacher is doing.

Students read from a list of movements and do them.

Include movements that involve playground equipment.

DIRECTION DRAWING

OBJECTIVES: Develop ability to give oral directions
Develop ability to follow oral directions

MATERIALS: chalkboards
chalk
design cards (included)

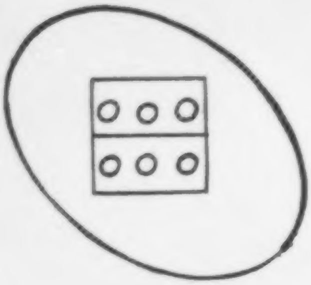
PREPARATION: cut out design cards

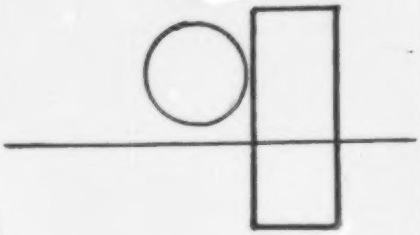
ACTIVITY:

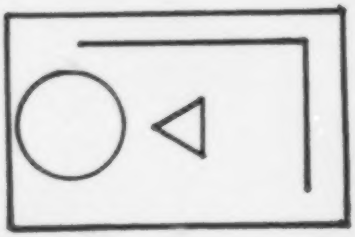
Give one design card to each student.

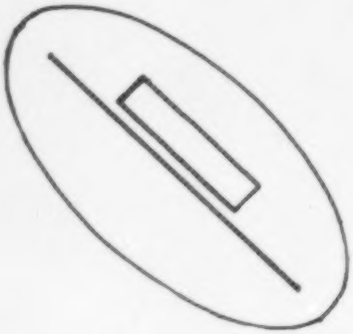
- Each student takes a turn. Without letting the others see the design, each student gives directions on how to draw the design on the design card.
- The other students try to draw the design according to directions without looking at the original.
- Compare drawings to see whose was most like the original.

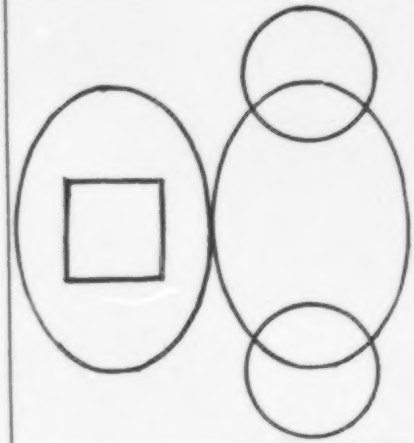
DESIGN CARDS: DIRECTION DRAWING

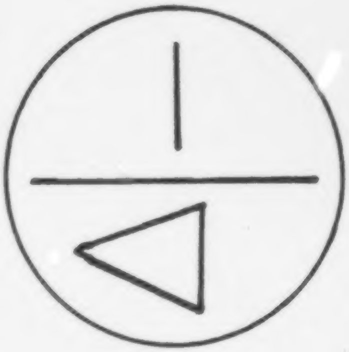


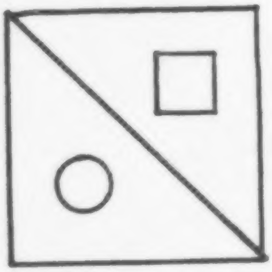


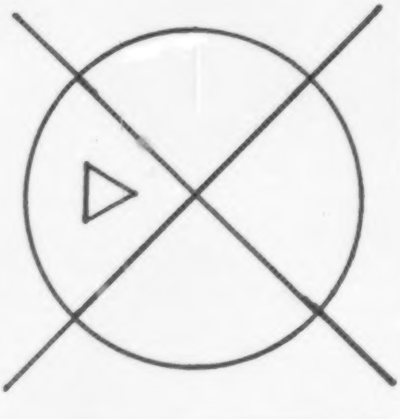


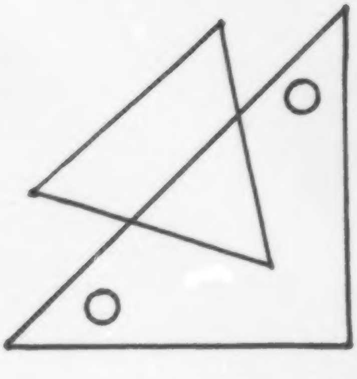


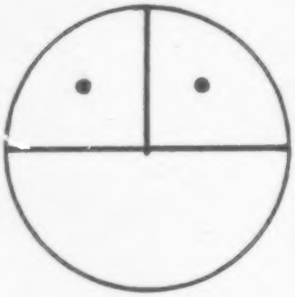


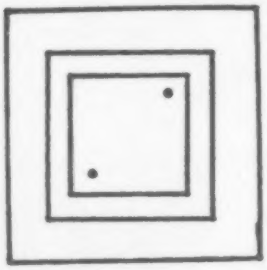


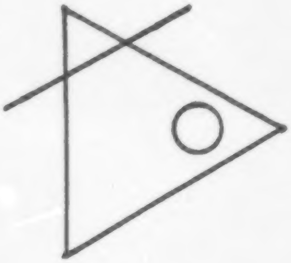












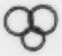
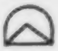
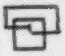
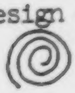
DESIGN DRAWING

OBJECTIVE: Develop visual memory

MATERIALS: chalkboard, chalk, eraser

ACTIVITY:

◐ Draw a large, simple, abstract design on chalkboard.

Example:    

◐ Allow students to view it for a few seconds and then cover it.

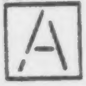
◐ Students draw the design from memory.

● Students compare drawings to decide which ones were most like the original.

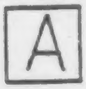
ERASED LETTER CONCENTRATION - UPPER CASE

OBJECTIVE: develop visual closure
letter recognition

MATERIALS: set of upper case erased letter cards



set of letter cards



PREPARATION:

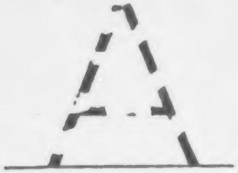
A set of letter cards and erased letter cards are duplicated, cut apart, and distributed to students.

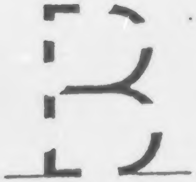
ACTIVITY:

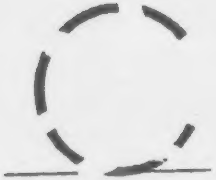
◑ Cards are placed either faceup or facedown.

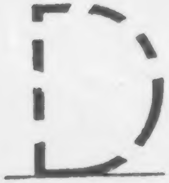
◑ Student tries to match an erased letter card with an identical non-erased card.
If they are a match, the student keeps the pair.
If they are not a match, the cards are returned to the game.
Game is over when all cards are matched.
Two or more students may play at one time.

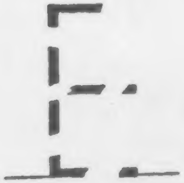
Erased Letter Concentration-Upper Case

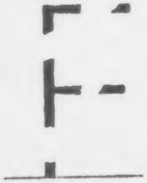


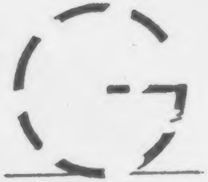


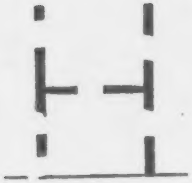


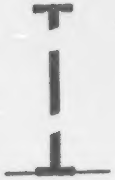


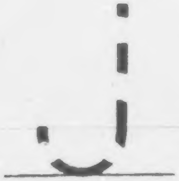


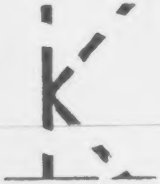


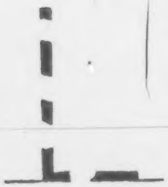


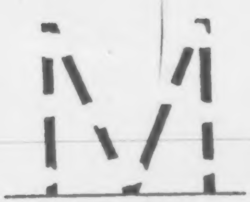












Erased Letter Concentration-Upper Case

A

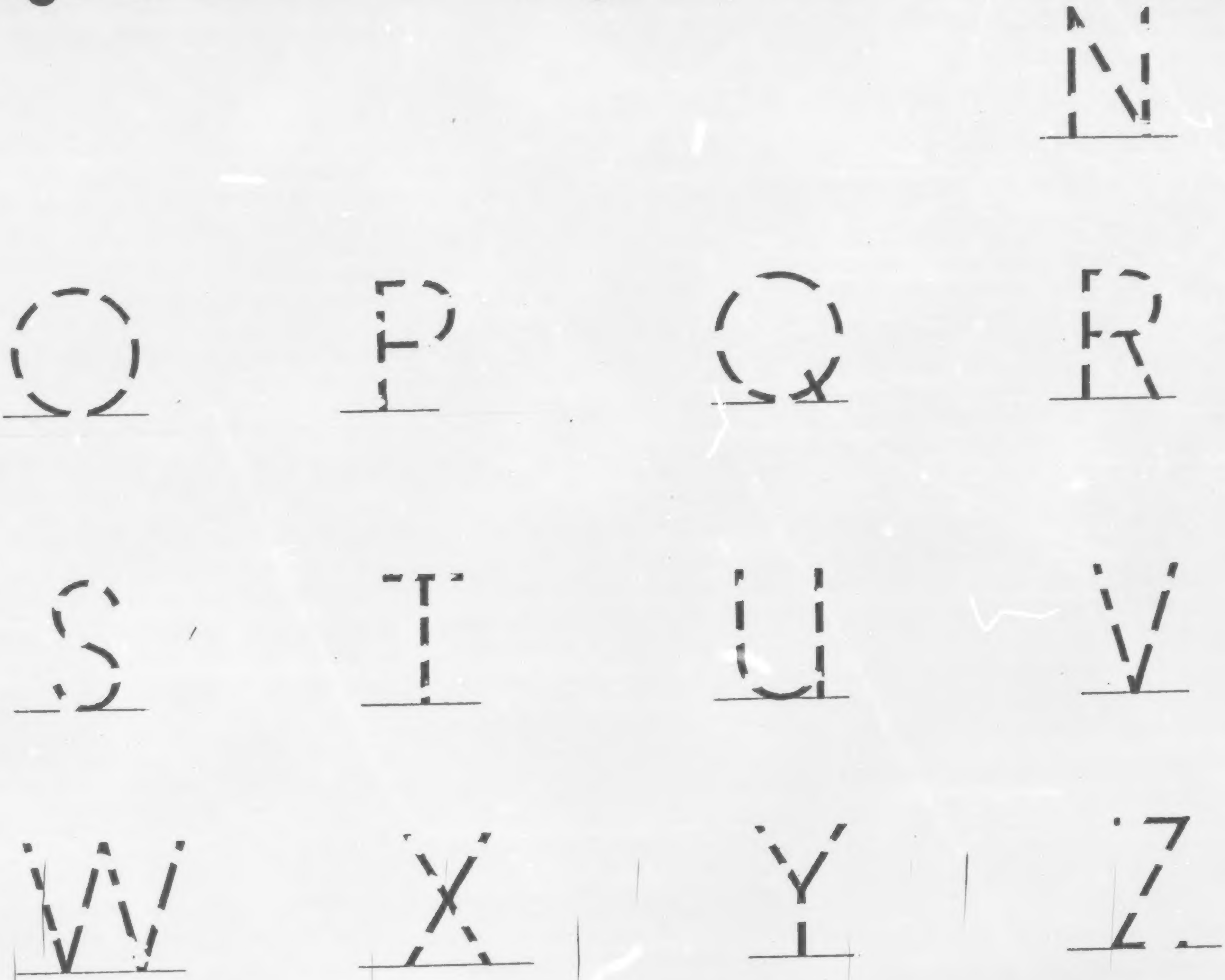
B C D E

F G H I

J K L M

183-INT

Erased Letter Concentration-Upper Case


N
O
P
Q
R
S
T
U
V
W
X
Y
Z

184-INT

N

O P Q R

S T U V

W X Y Z

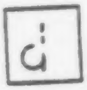
185-INT

Erased Letter Concentration-Upper Case

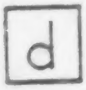
ERASED LETTER CONCENTRATION - LOWER CASE

OBJECTIVE: develop visual closure
letter recognition

MATERIALS: set of lower case erased letter cards



set of lower case letter cards

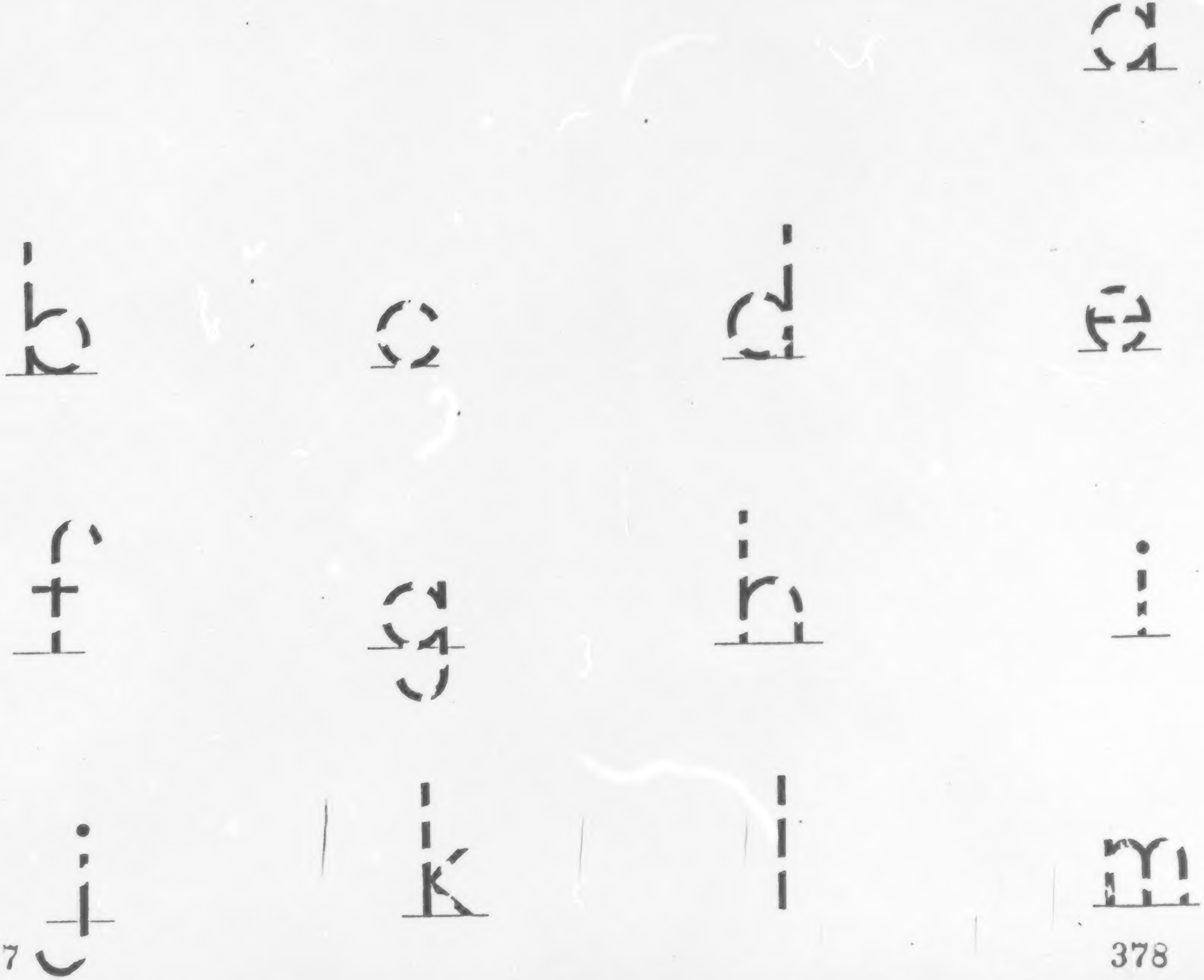


PREPARATION:

A set of letter cards and erased letter cards are duplicated, cut apart, and distributed to students.

ACTIVITY:

- Cards are placed either faceup or facedown.
- Student tries to match an erased letter card with an identical non-erased card.
  If they are a match, the student keeps the pair.
  If they are not a match, the cards are returned to the game.
  Game is over when all cards are matched.
  Two or more students may play at one time.



Erased Letter Concentration-Lower Case

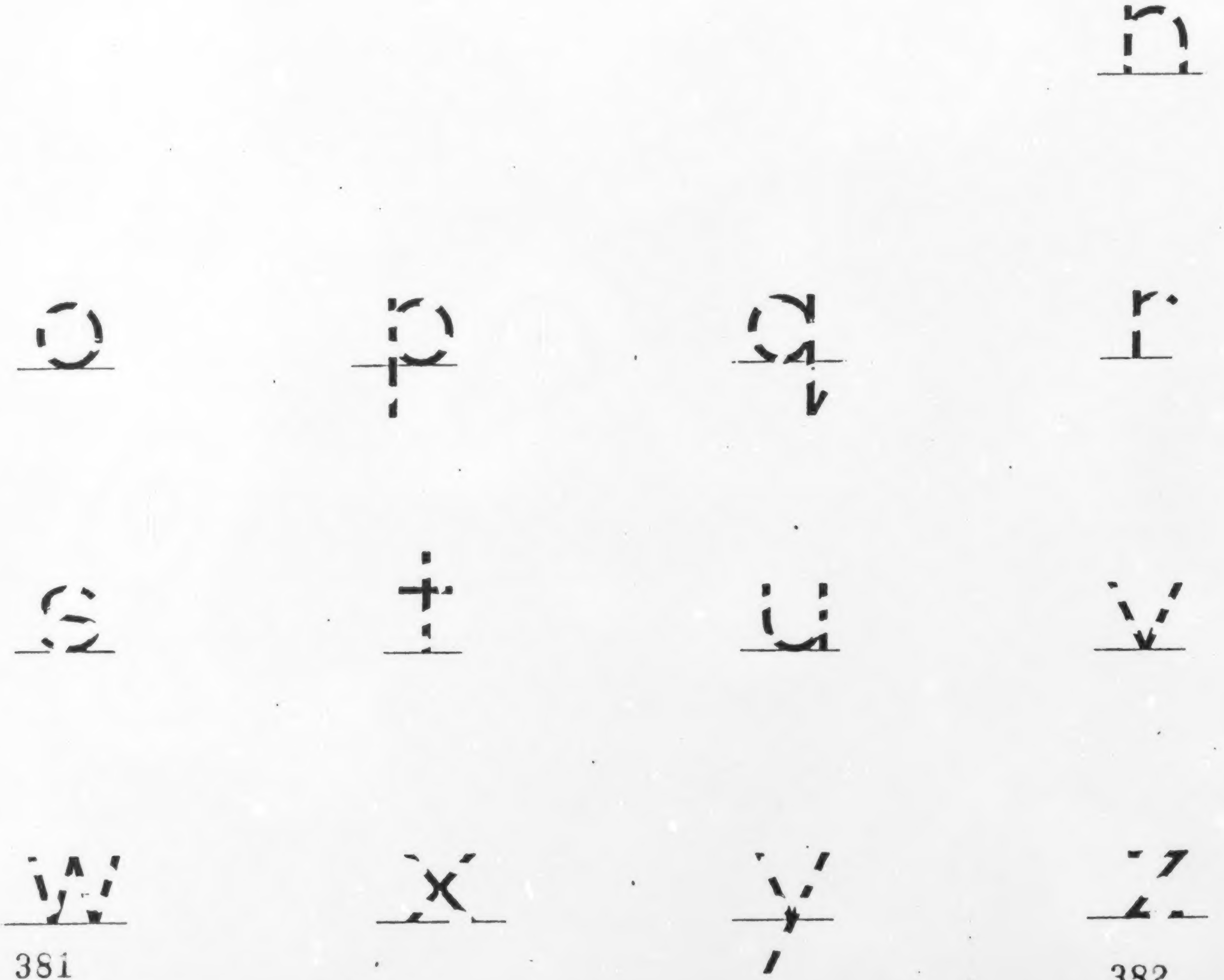
Erased Letter Concentration-Lower Case

a

b c d e

f g h i

j k l m


n
o
p
q
r
s
t
u
v
w
x
y
z

Erased Letter Concentration-Lower Case

Erased Letter Concentration-Lower Case

n

o p q r

s t u v

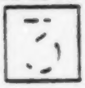
w x y z

190-INT

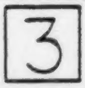
ERASED NUMERAL CONCENTRATION

OBJECTIVE: develop visual closure
number recognition

MATERIALS: set of erased numeral cards



set of numeral cards



PREPARATION:

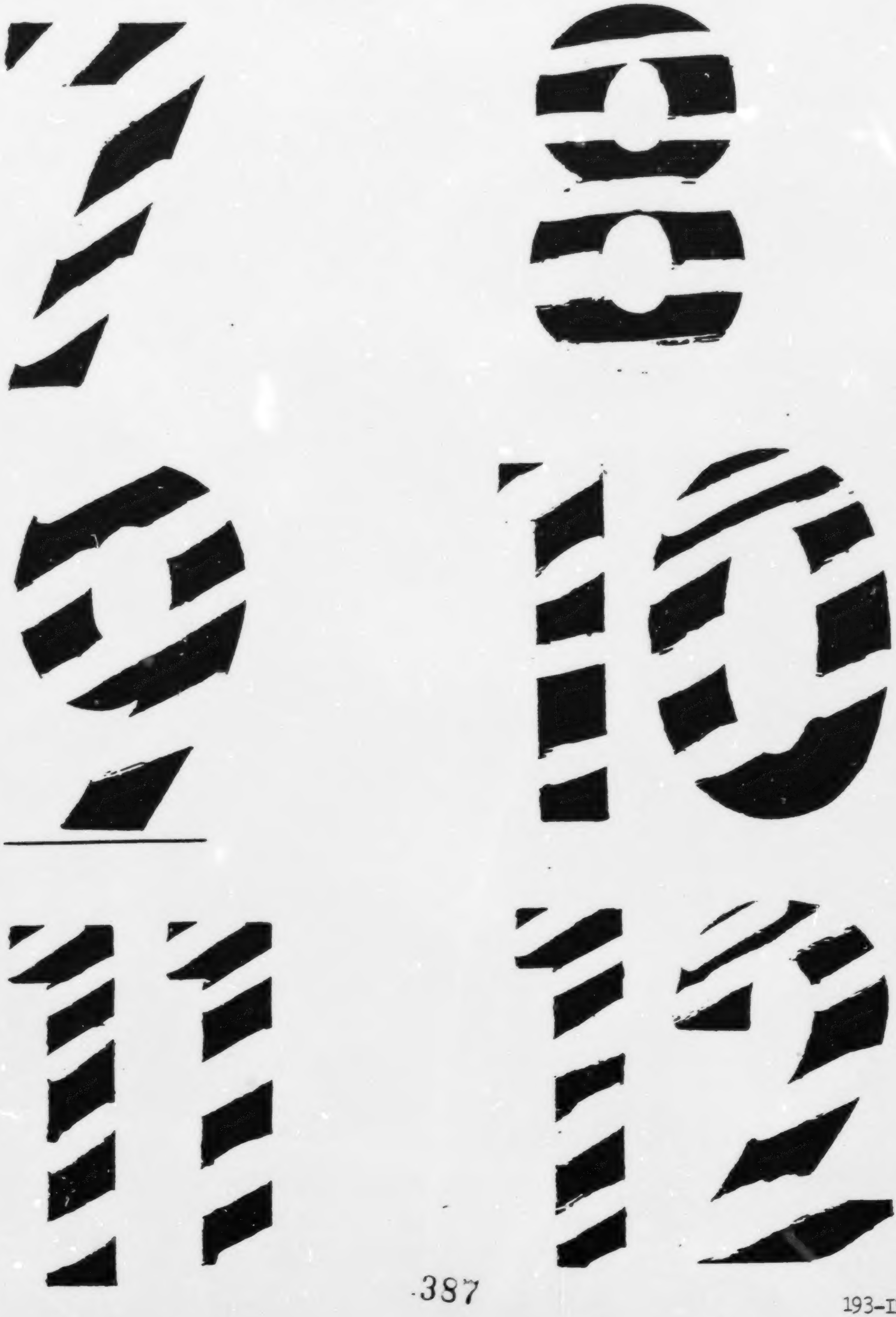
A set of numeral cards and erased numeral cards are duplicated, cut apart, and distributed to students.

ACTIVITY:

◐ Cards are placed either faceup or facedown.

◐ Student tries to match an erased numeral card with an identical non-erased card.
If they are a match, the student keeps the pair.
If they are not a match, the cards are returned to the game.
Game is over when all cards are matched.
Two or more students may play at one time.

ERASED NUMERAL CONCENTRATION


7
8
9
10
11
12

1	2
3	4
5	6

7	8
9	10
11	12

389

195-INT

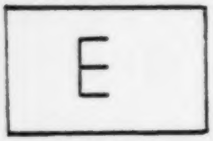
CHALKBOARD - SYMBOL RECOGNITION

OBJECTIVE: Recognizing letters (upper and lower case) and numbers

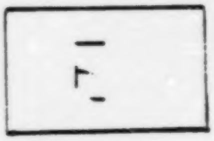
MATERIALS: individual chalkboards
chalk
erasers

ACTIVITY:

● Student writes secretly either a lower or upper case letter on an individual chalkboard.



◑ Student makes two erasures across the letter. (To make this more difficult, designate more erasures.)



◐ Student shows partially erased letter to class.

● Other students try to identify the letter.

The identical procedure can be used for numbers.

HOW TO MAKE AN ORIGAMI SAILBOAT

OBJECTIVE: Following a sequence of directions

MATERIALS: Sailboat Directions (included)
square piece of lightweight paper
felt pen
masking tape

Origami (or paper folding) is a national art form in Japan, and the techniques of folding are taught to the children in Japanese schools as part of the cultural heritage.

ACTIVITY:

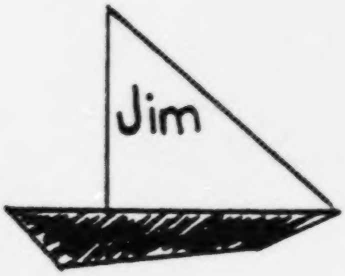
● Demonstrate (without talking) the step-by-step procedure to make the sailboat. A bell, buzzer, tapping on a table, etc. may be used to signal each new step.

● Show class completed origami sailboat.

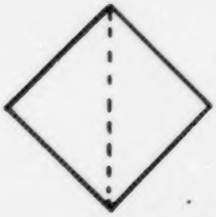
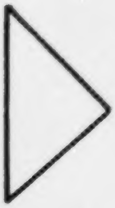
◑ Give one paper square and a copy of the sailboat directions to each student.

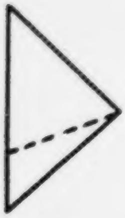
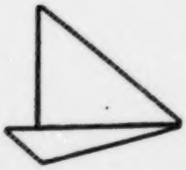
● Allow students to try to make the boat.

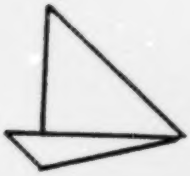
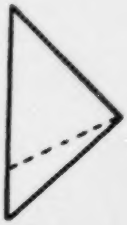
● If necessary, demonstrate making the boat again, having students copy step by step, as you read out loud and follow the direction sheet.

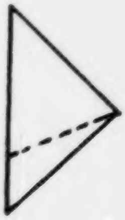
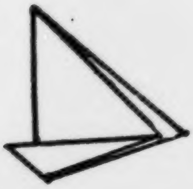


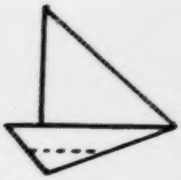
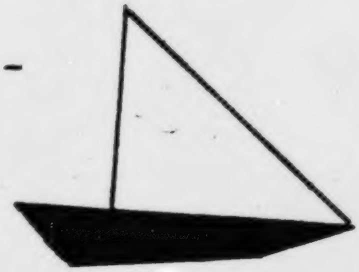
HOW TO MAKE AN ORIGAMI SAILBOAT

1. Fold  along ----------- 

2. Fold  along ----------- 

3. Unfold  ------------ 

4. Reverse  the crease 

5. Fold  along ------- 

ORIGAMI BIBLIOGRAPHY

Sperling, Walter. How to Make Things Out of Paper. New York: Young Readers Press, Inc., 1961.

The Oriental Art of Paper Folding (kit of paper and instructions). New York: Child Guidance Press, 1969.

TRACING TRACKS

OBJECTIVE: Understanding relationships
Improving visual tracking

MATERIALS: Tracing Tracks sheets (included)

ACTIVITY:

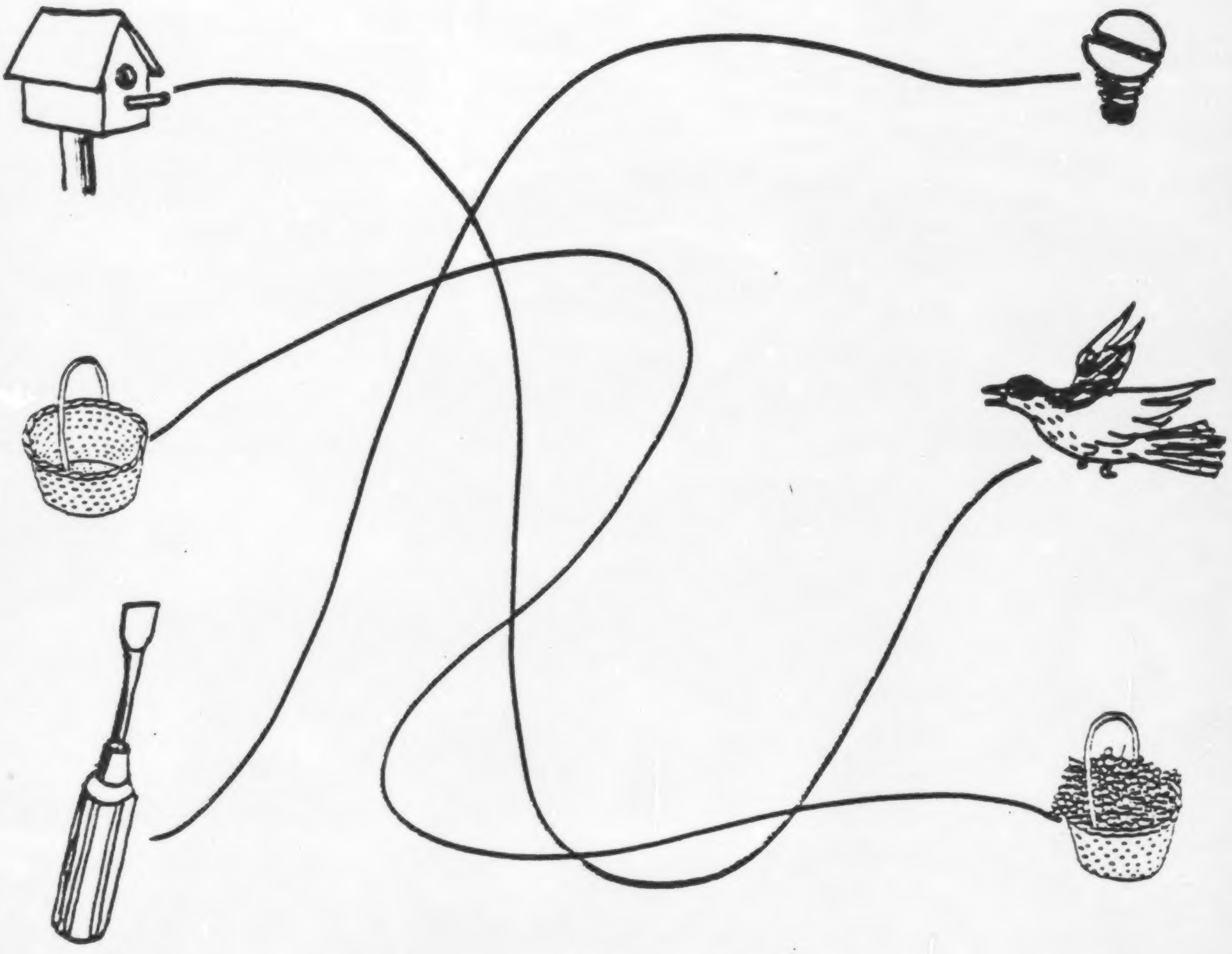
Students use pencil, crayon, or finger.

◑ Begin at one end of the track, and without lifting the finger or crayon, trace the line to the other end.

◑ Students can color pictures.

● Students discuss the relationship between pictures at either end of lines.

TRACING TRACKS



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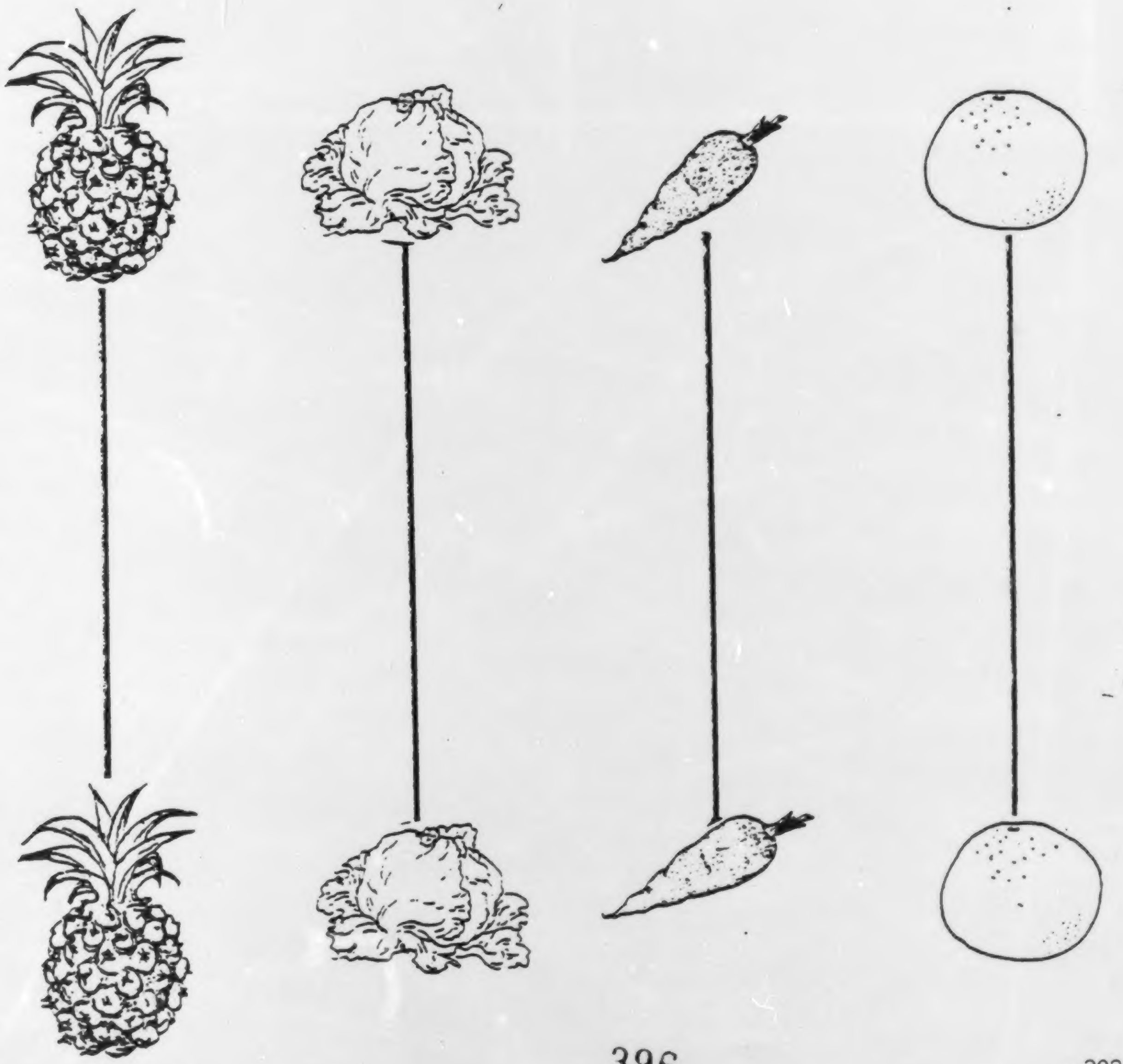

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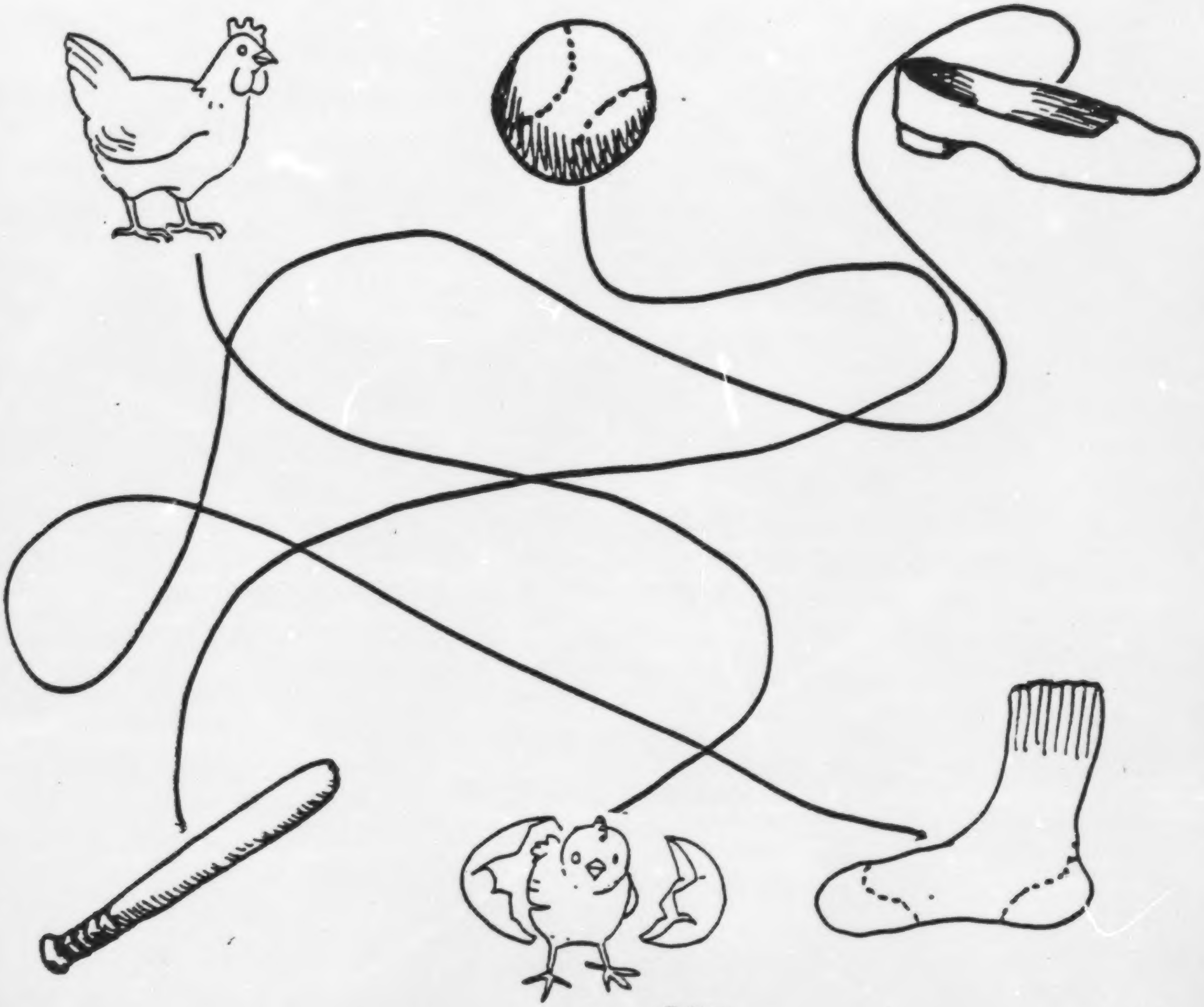

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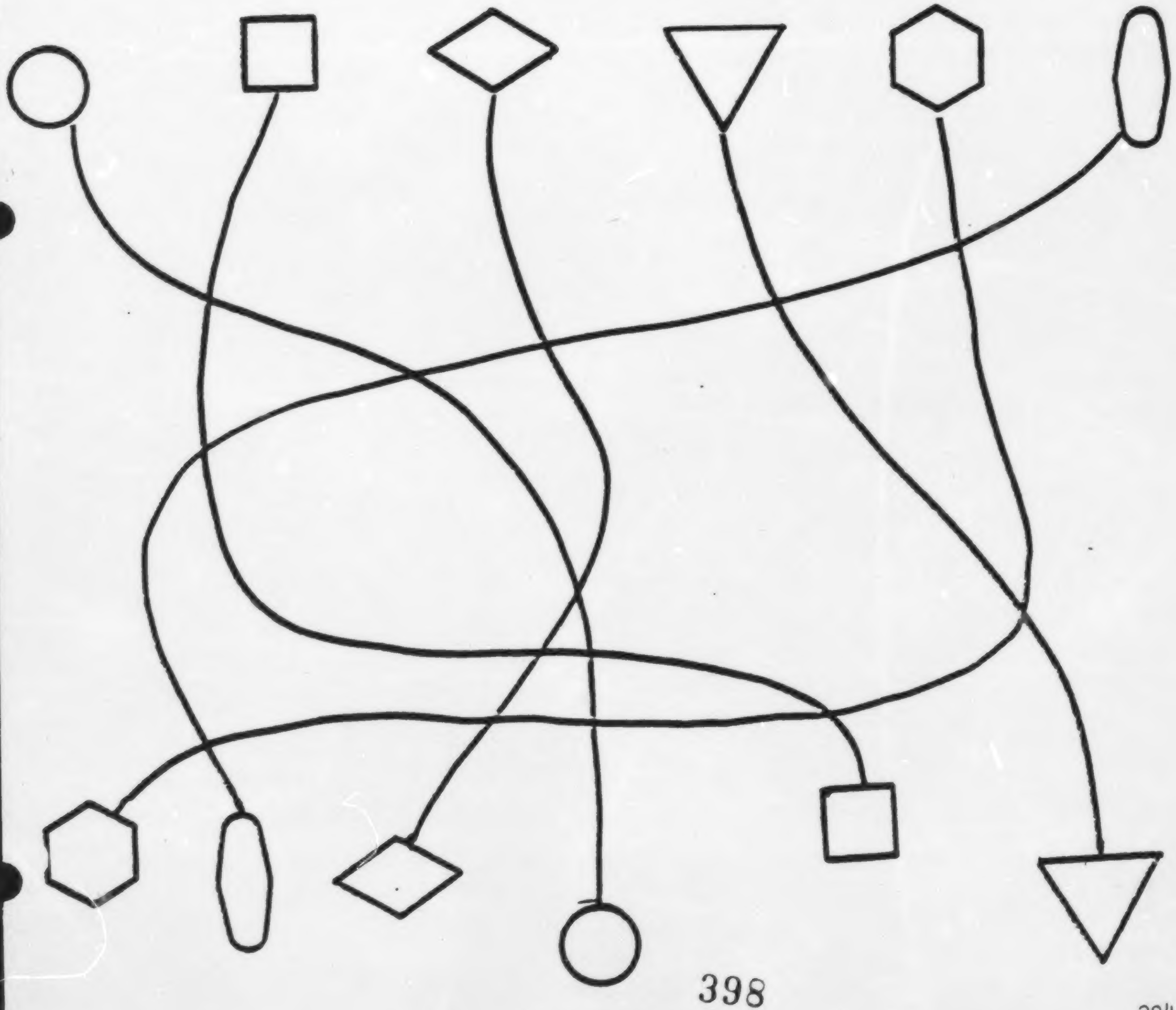

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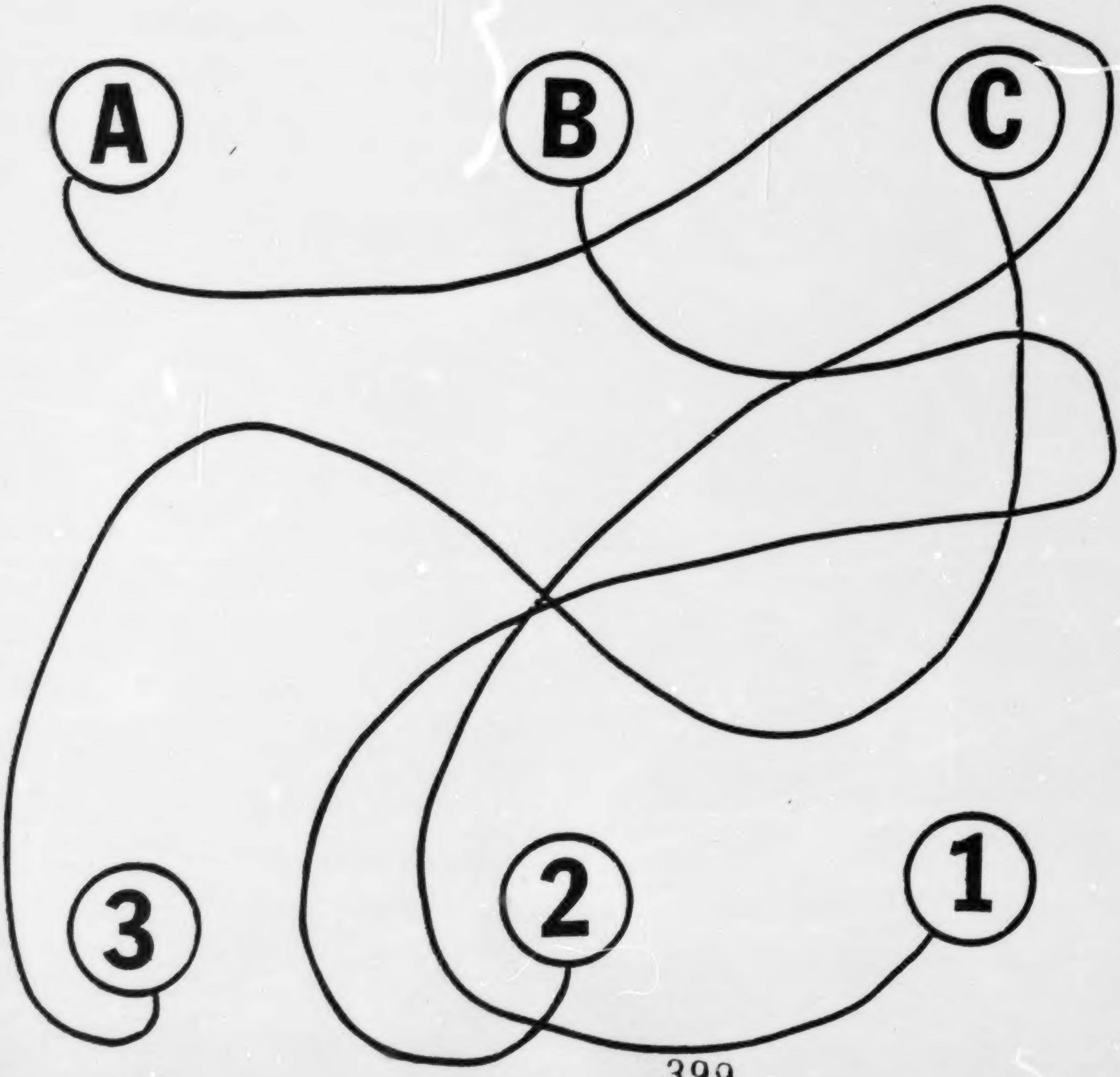

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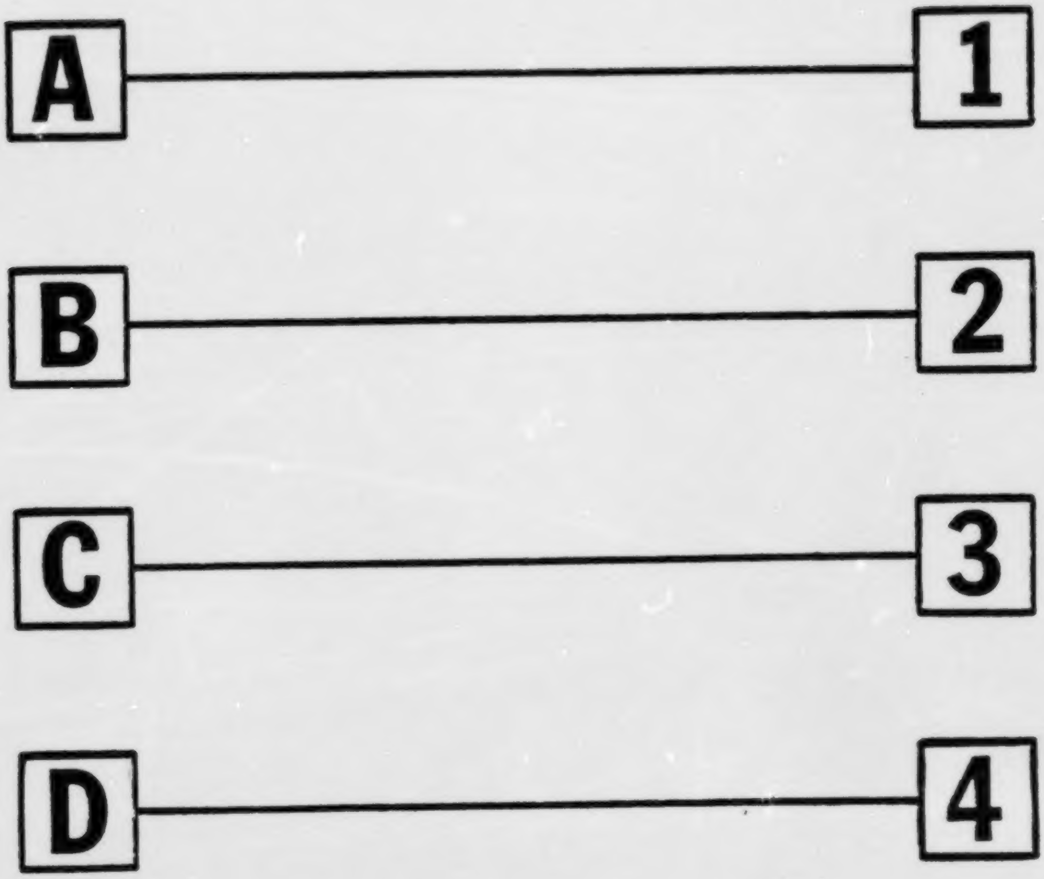

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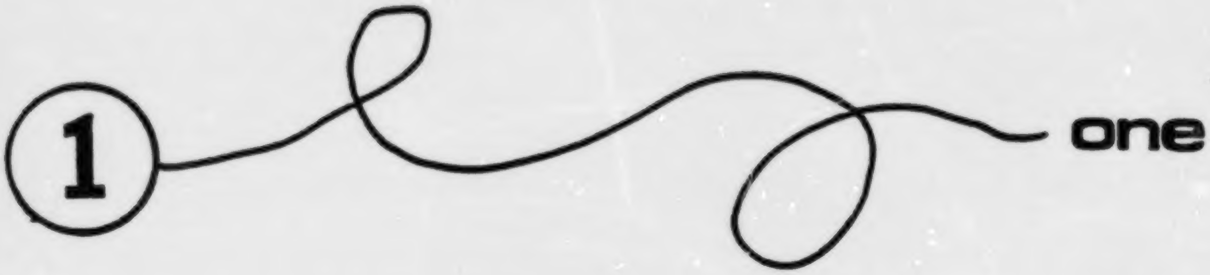

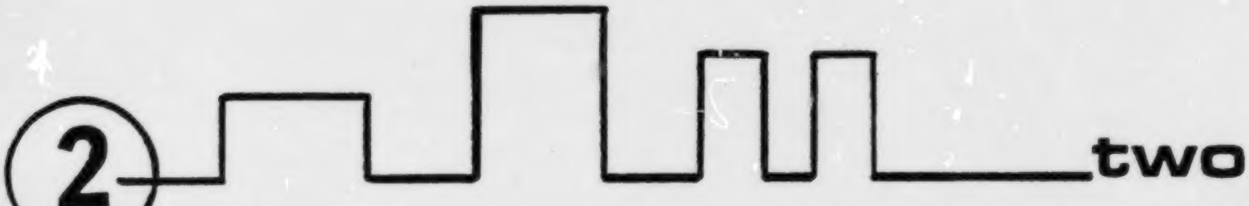

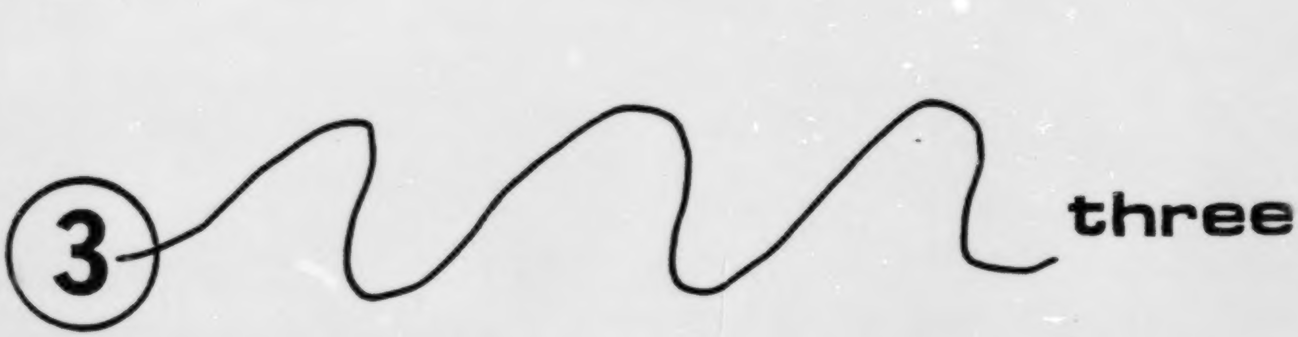

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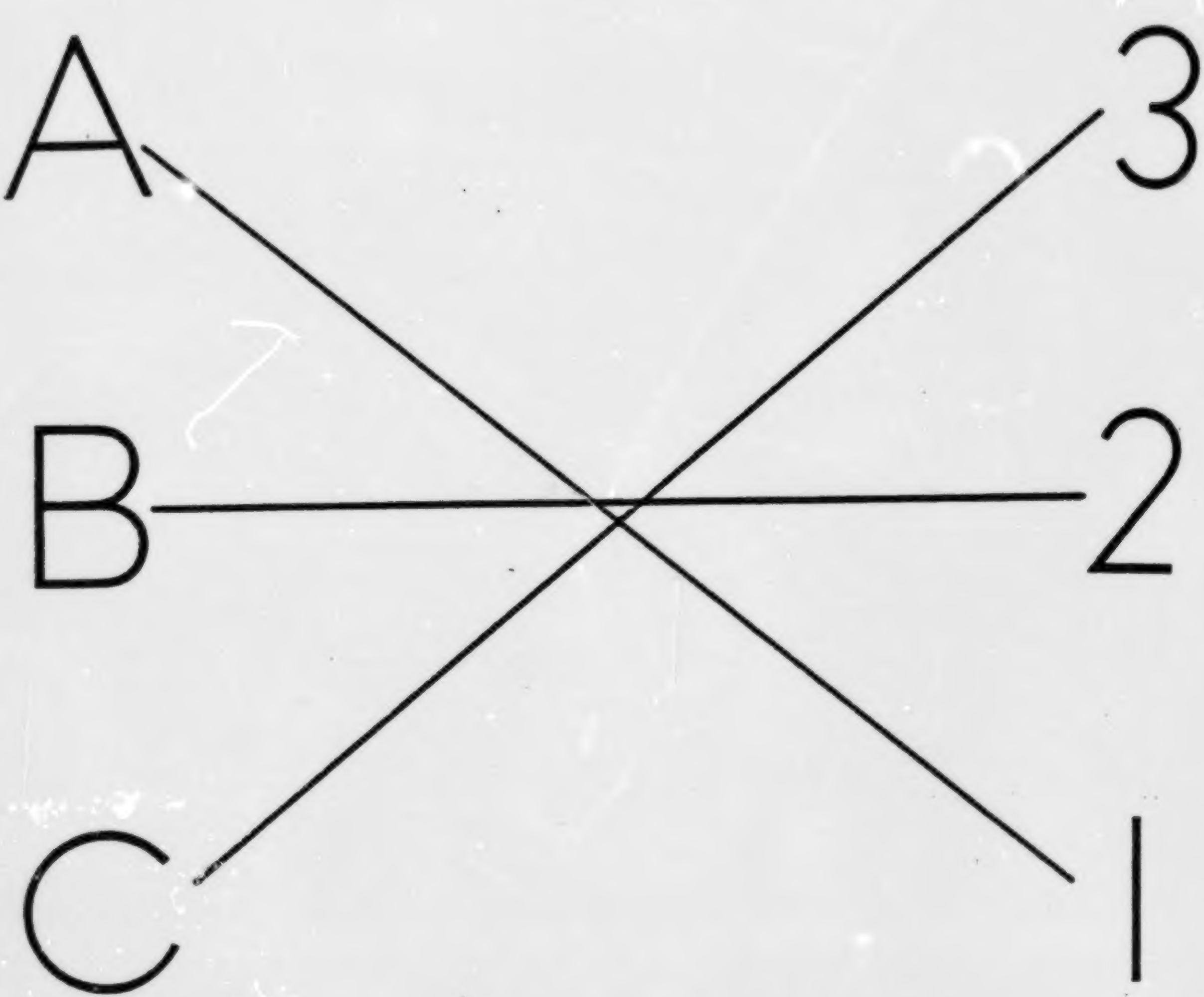

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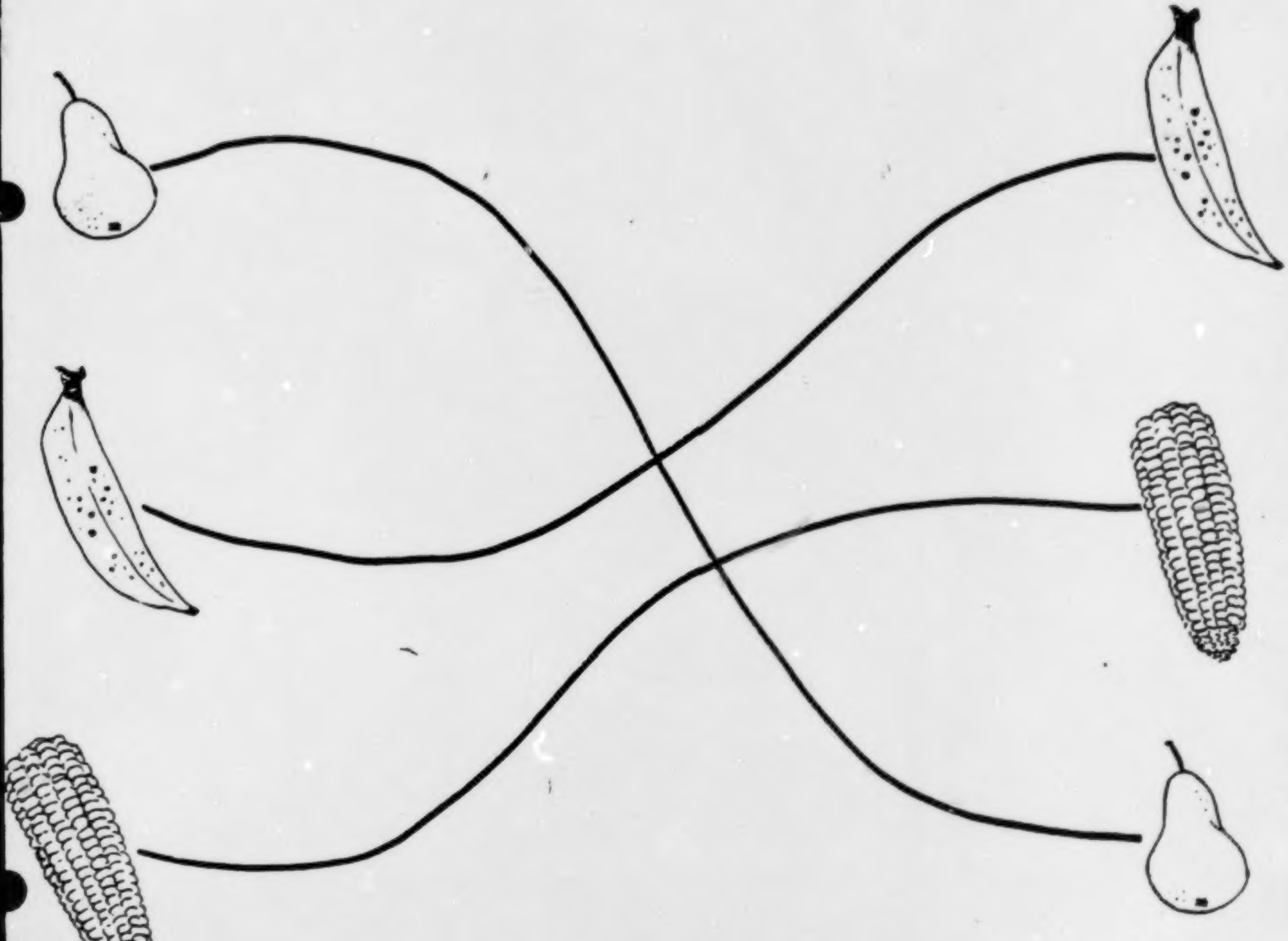

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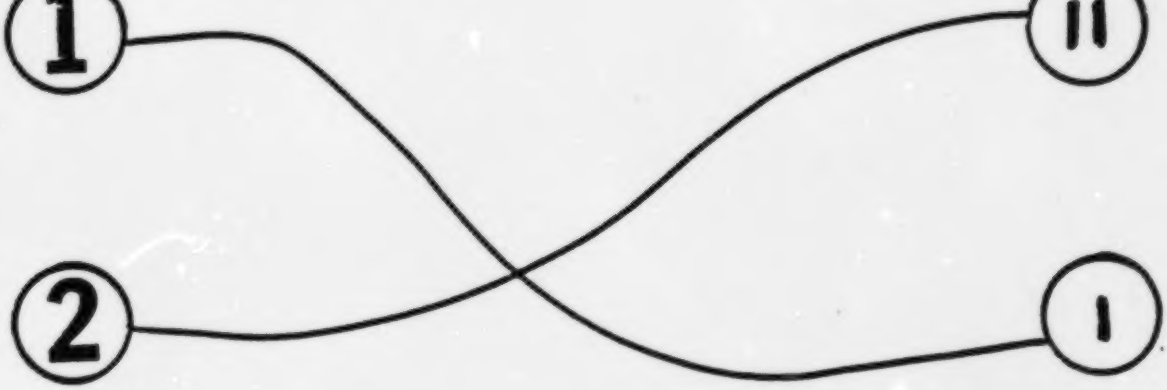
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1
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1111
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111

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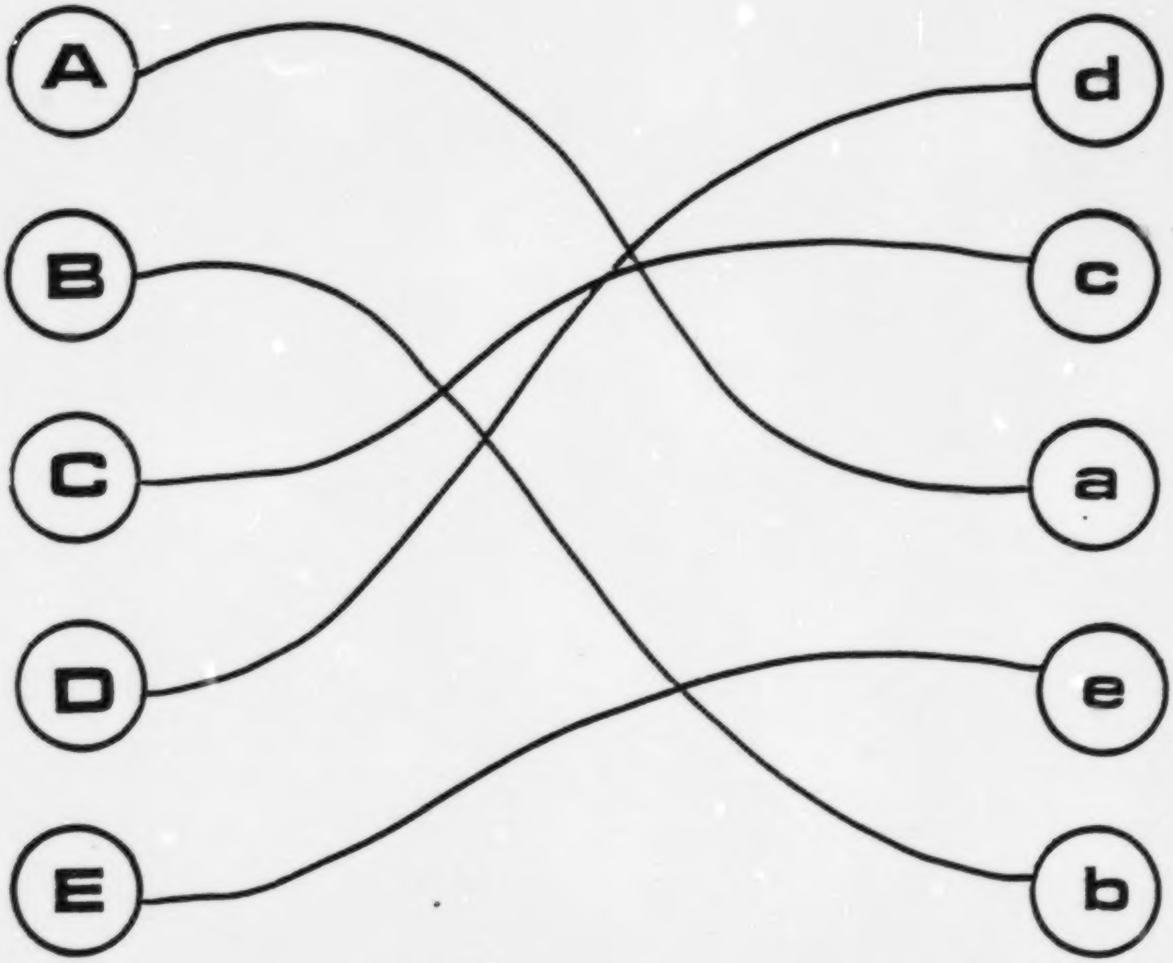
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C
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E
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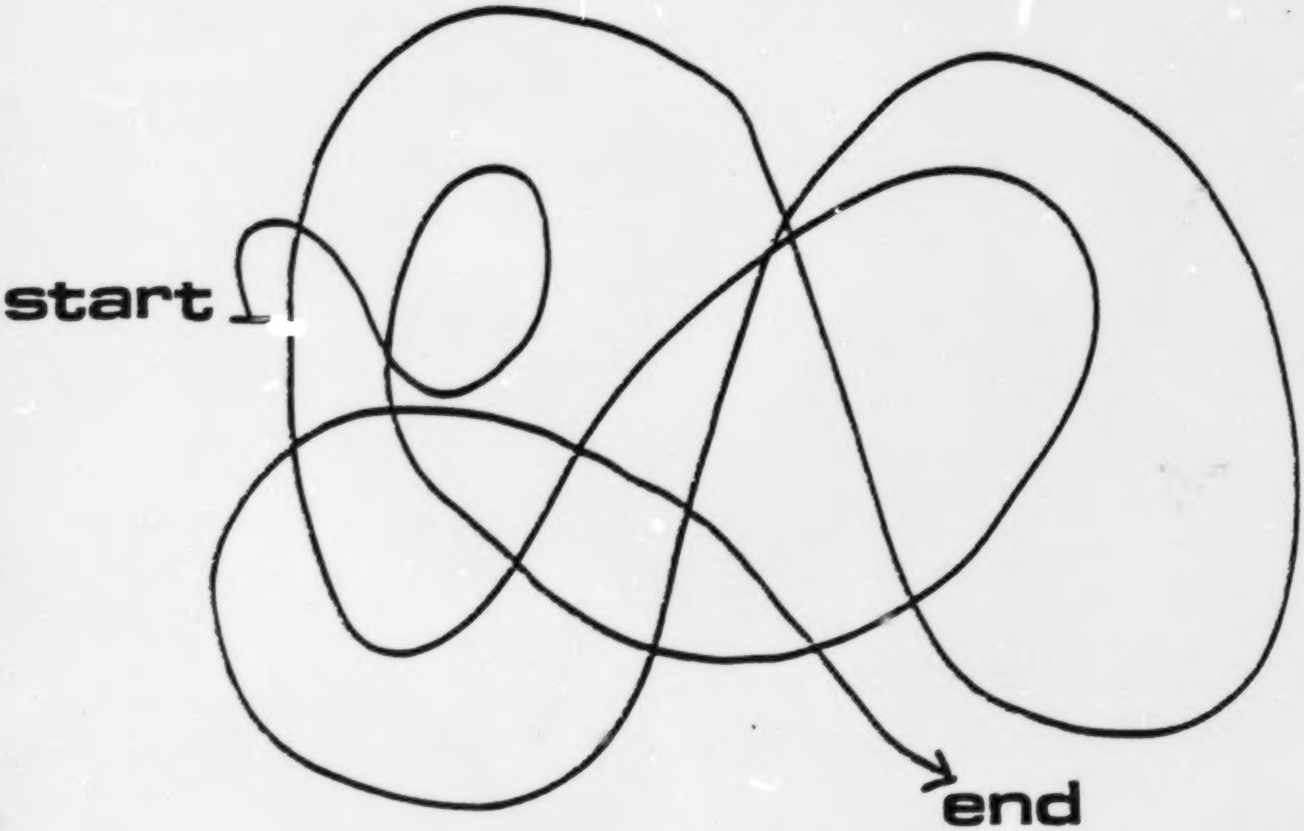

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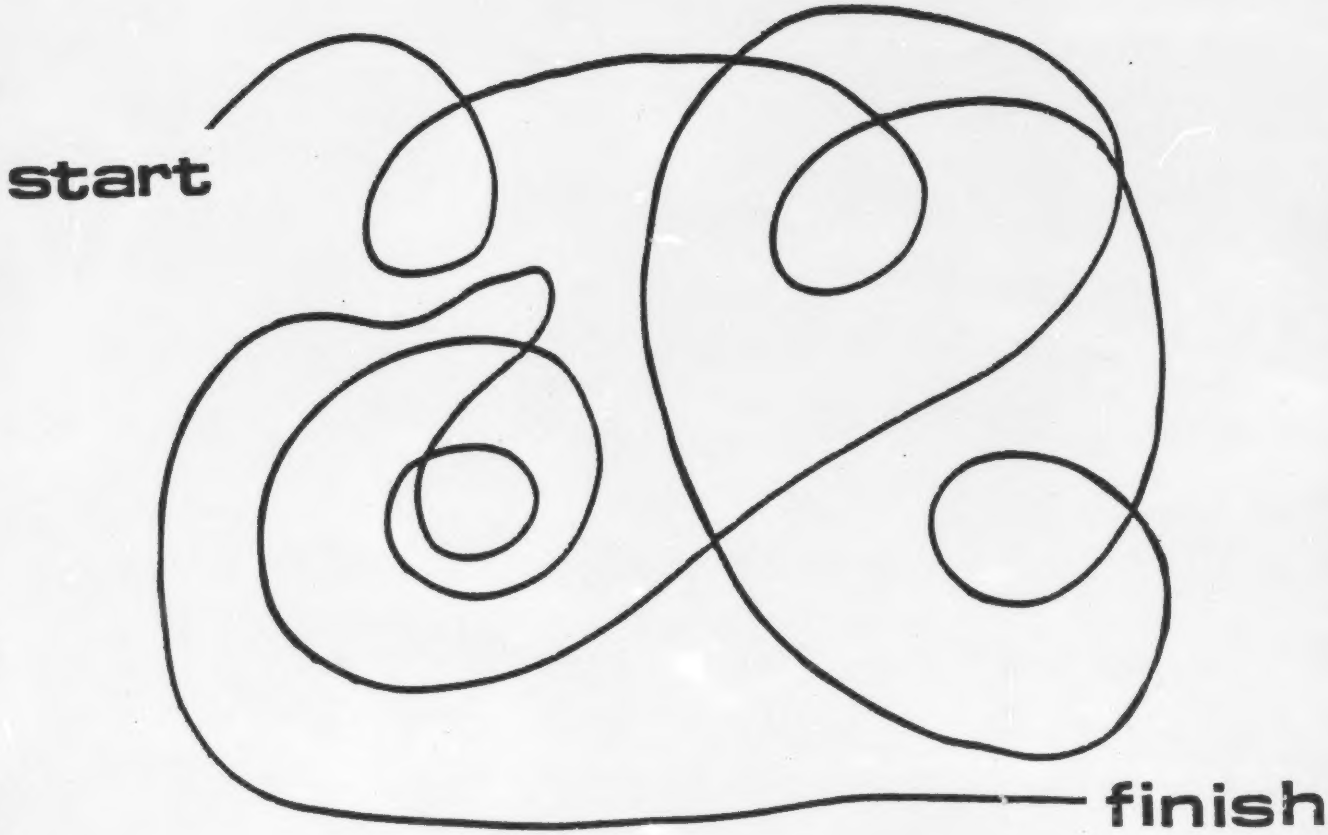

start
finish

CHALKBOARD MATCHING

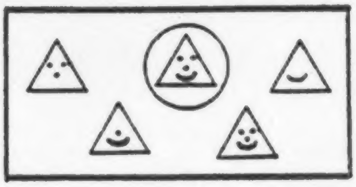
OBJECTIVE:
Recognizing different orientations of a figure, numeral or letter in space
Matching shapes and figures
Matching numerals
Matching letters
Matching words

MATERIALS:
chalkboards
chalk/erasers

ACTIVITY:

◑ Student draws a simple figure, letter, word, or numeral on chalkboard and circles it.

● Student draws an identical figure, letter, word, or numeral on chalkboard and then draws at least two others that are similar but not identical.

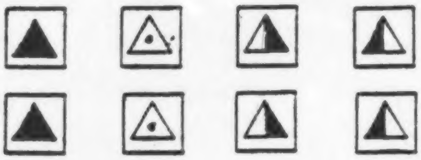


● Other students try to find the one that is identical to the circled one.

DESIGN CONCENTRATION

OBJECTIVE: Develop visual memory for designs

MATERIALS: sets of Concentration Cards



PREPARATION:

Two sets of the Concentration Cards are duplicated, cut apart, and distributed to students (sheet by sheet).

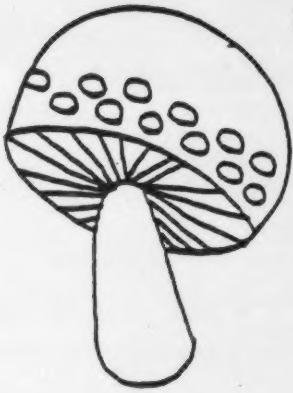
ACTIVITY:

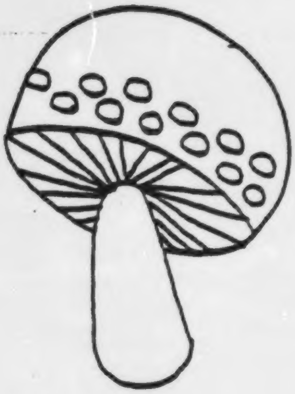
Student places cards facedown. (with young students, use the cards face up)

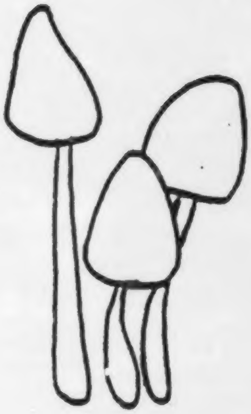
◐ Student tries to find pairs of identical cards.
Student keeps matched pairs.

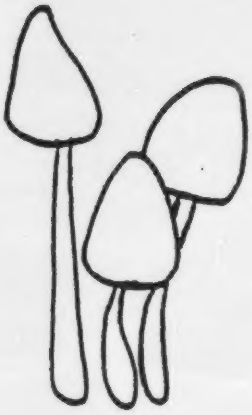
● Nonidentical pairs are returned to the game.
Game is over when all cards are matched.
Two or more students may play at one time.

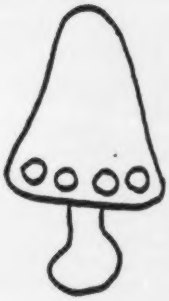
DESIGN CONCENTRATION

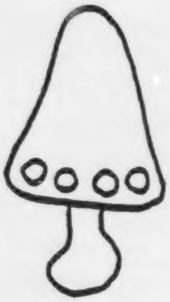


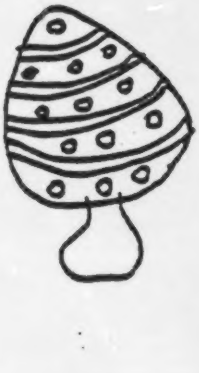


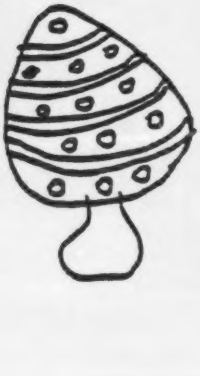












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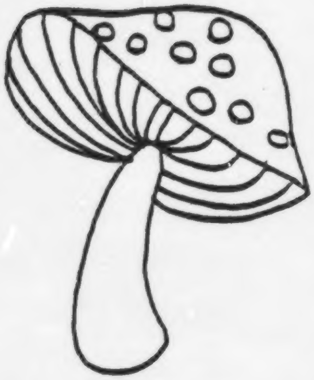

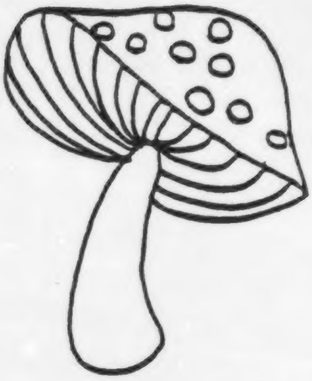

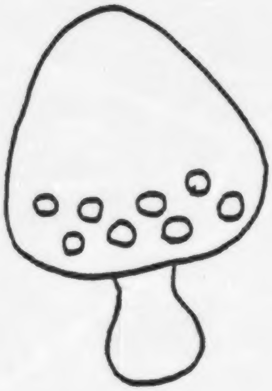

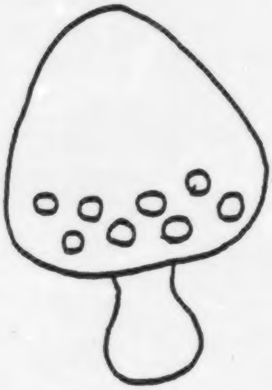

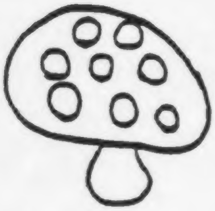

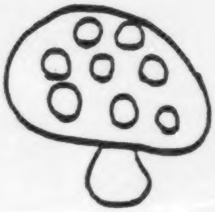

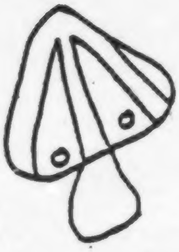

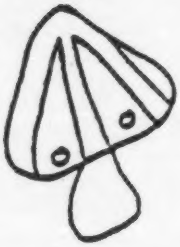

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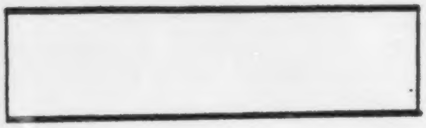

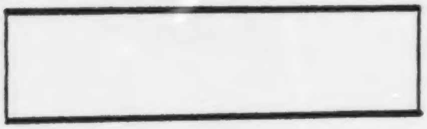

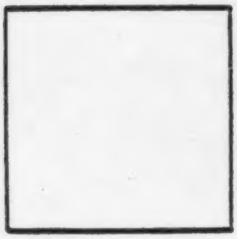

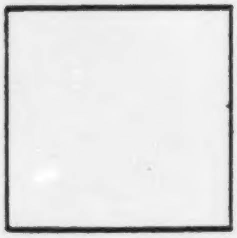

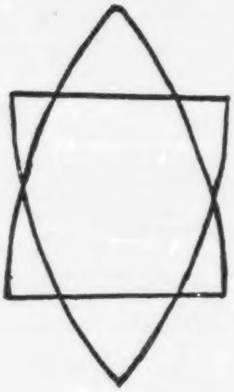

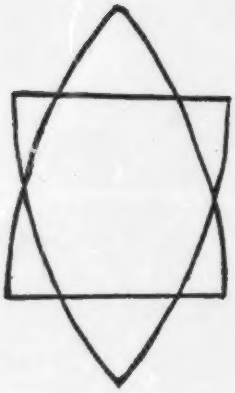

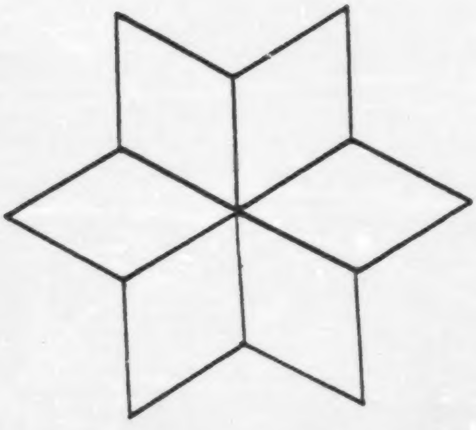

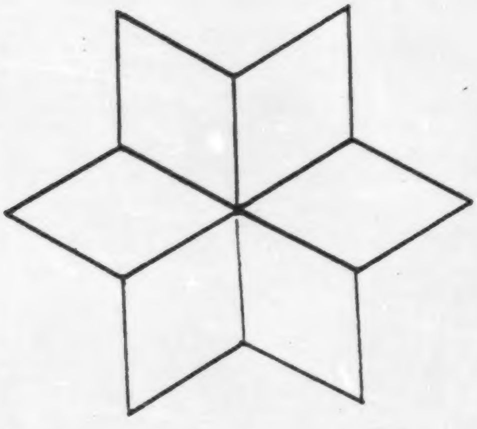

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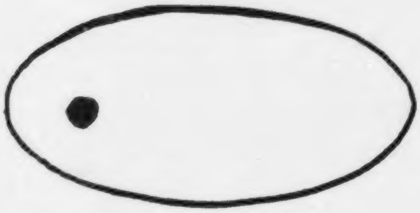

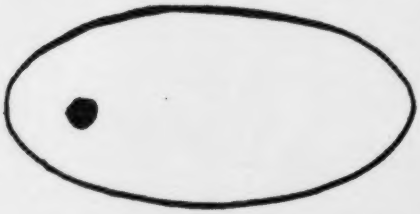

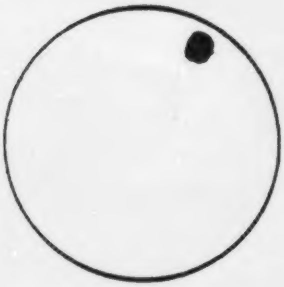

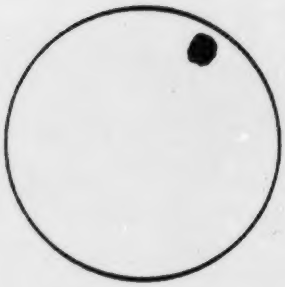

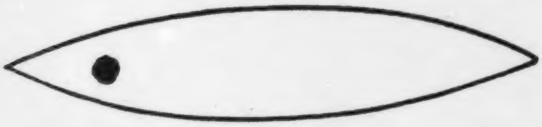

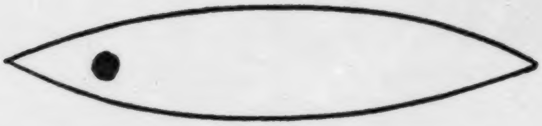

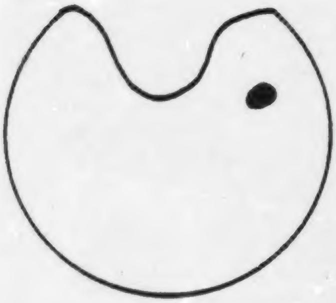

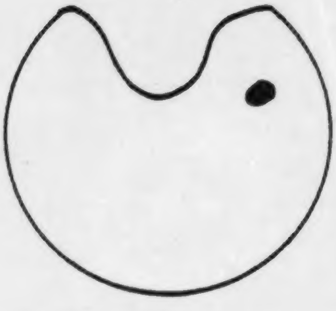

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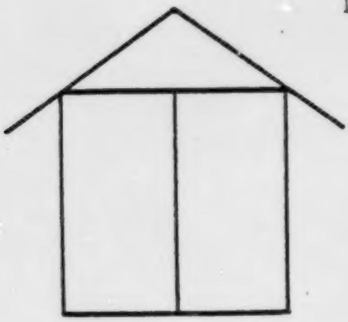

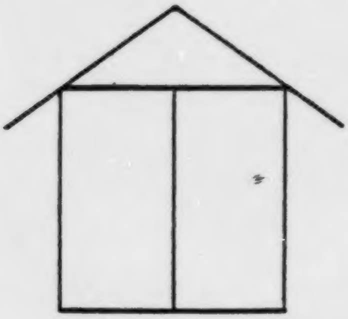

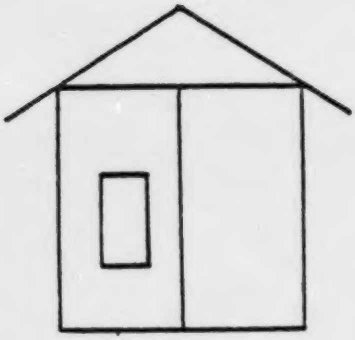

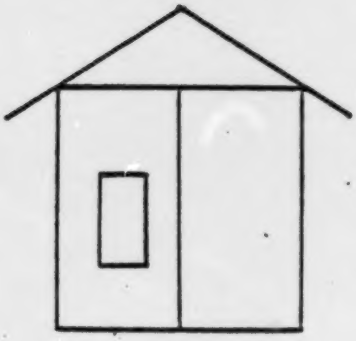

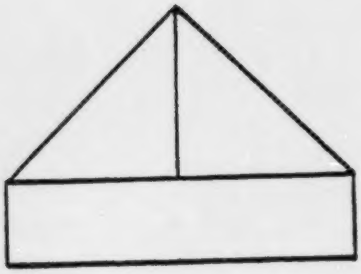

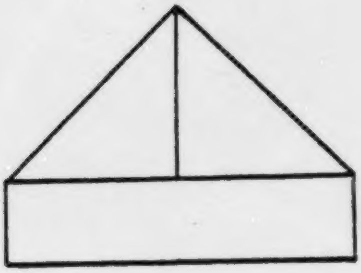

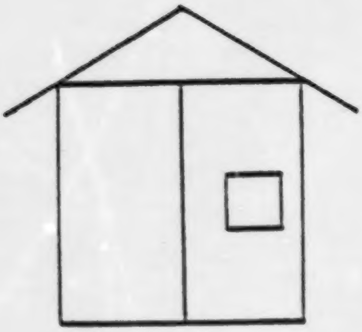

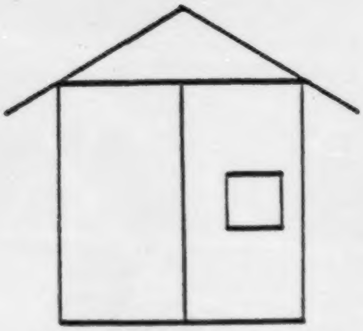

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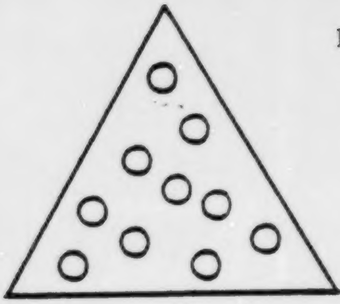

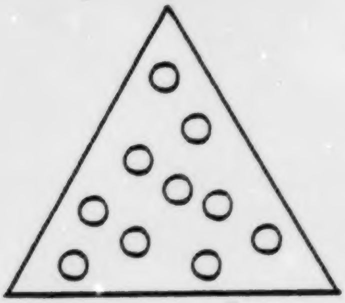

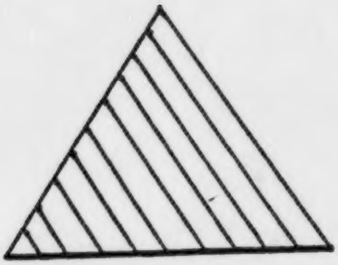

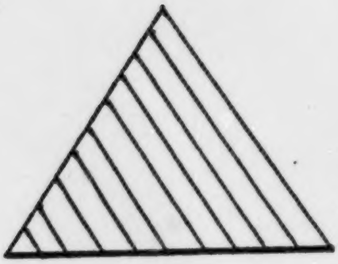

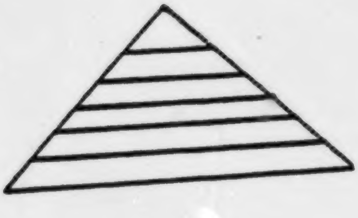

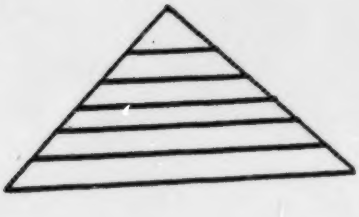

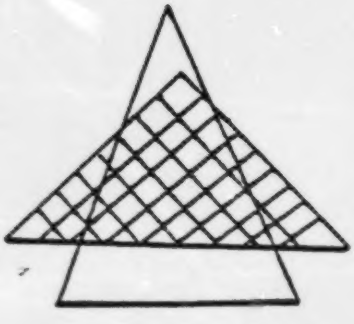

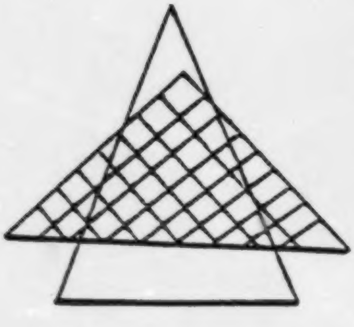

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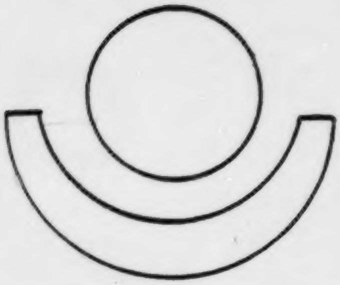
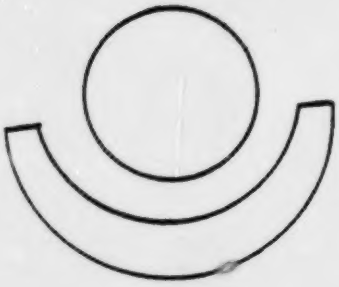
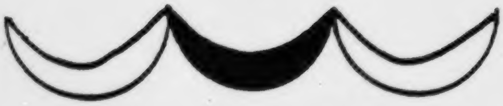
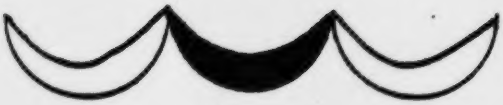
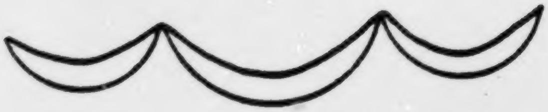
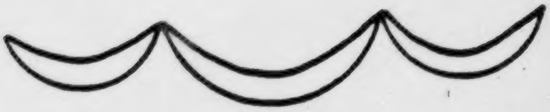
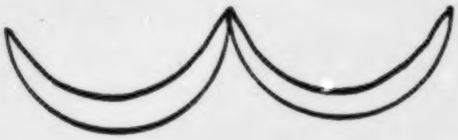
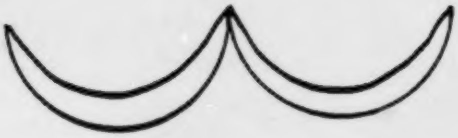

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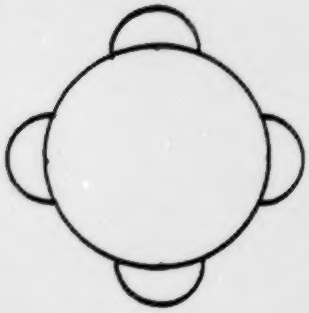

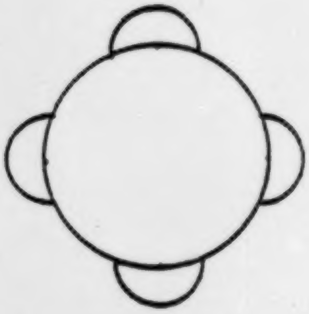

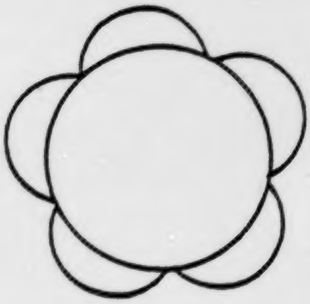

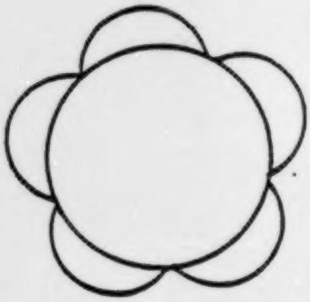

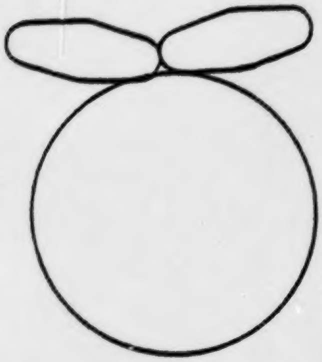

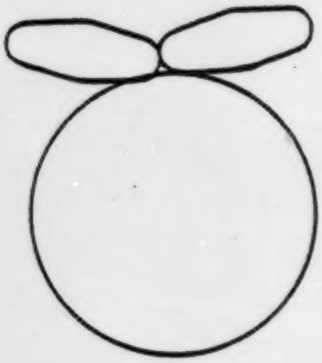

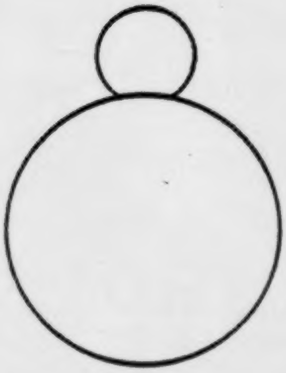

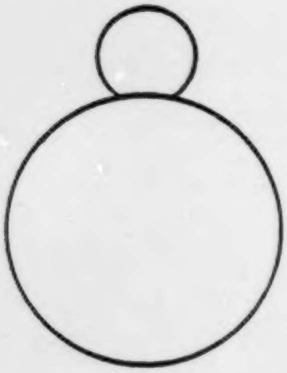

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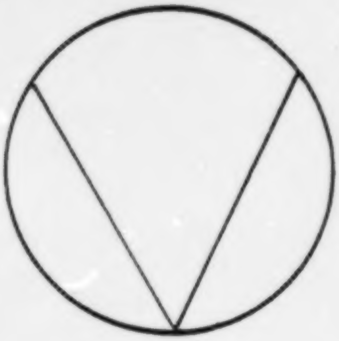

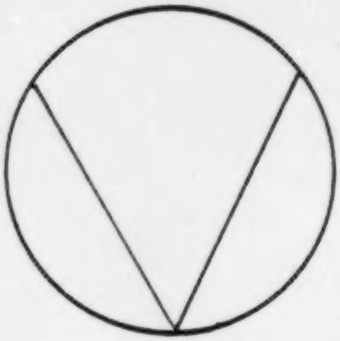

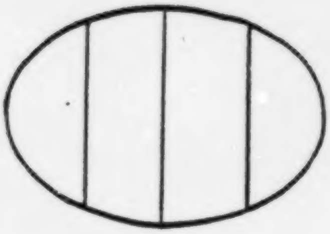

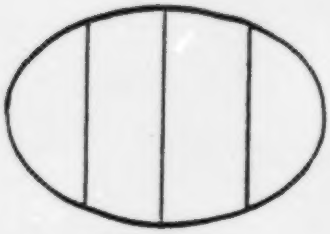

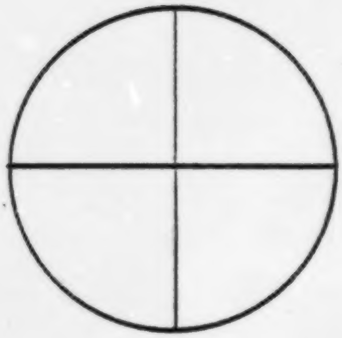

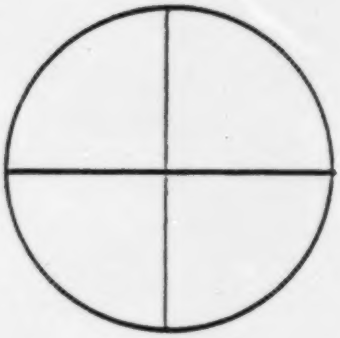

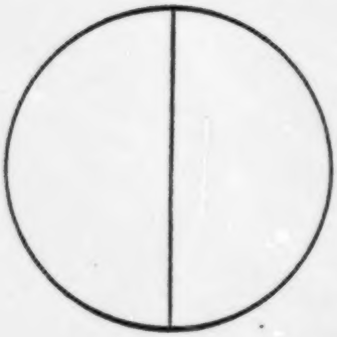

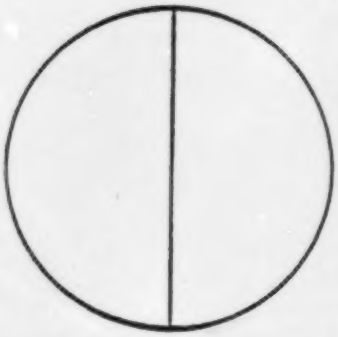

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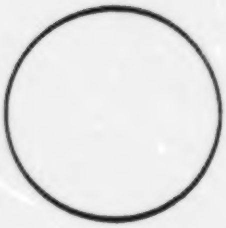

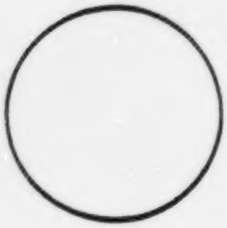

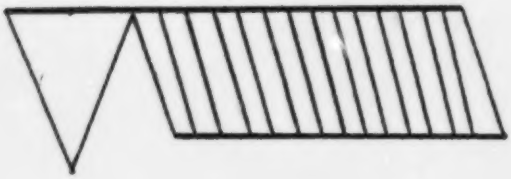

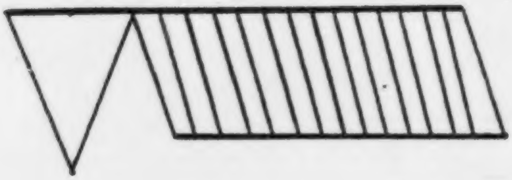

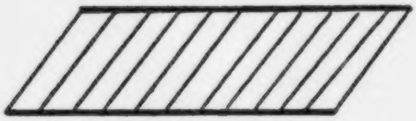

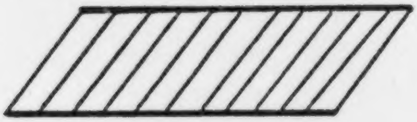

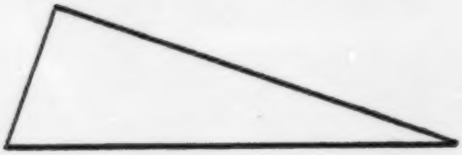

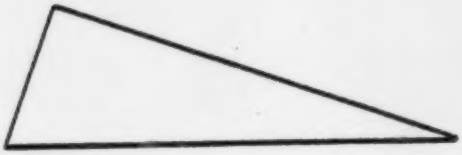

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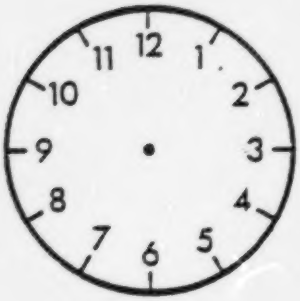
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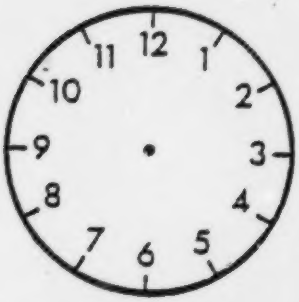
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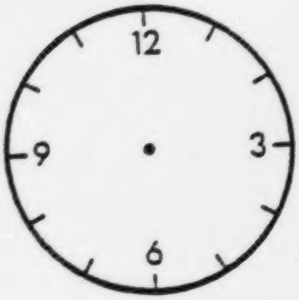

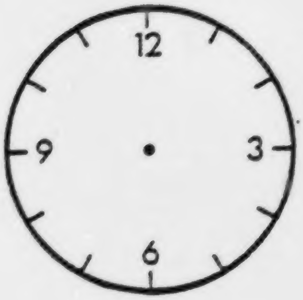

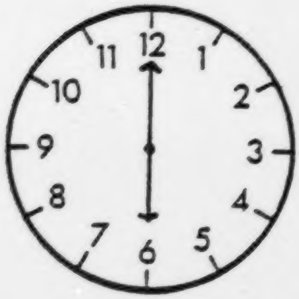
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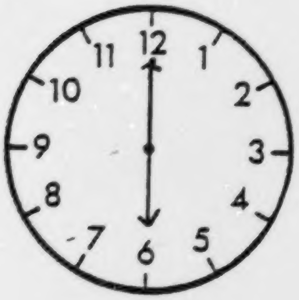
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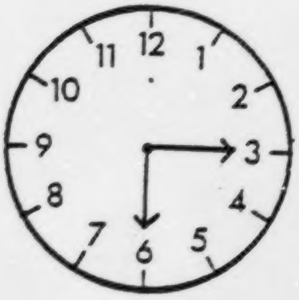
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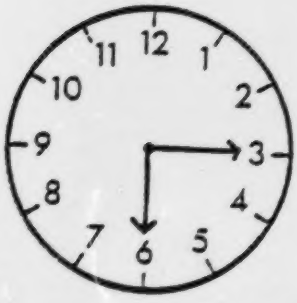
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